

NORTH AMERICAN ROCK GARDEN SOCIETY

*The Rock Garden*  
**QUARTERLY**

75TH YEAR  
FALL 2017

# CONTRIBUTORS

*All illustrations are by the authors of articles unless otherwise stated.*

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**Bob Nold** was born on the banks of the Cape Fear River in North Carolina; he and his family moved to southern California in the early 1950s. There, as his first horticultural experience, he ate a poisonous mushroom. He was dragged kicking and screaming to Denver in April 1961. There was snow on the ground. He took that as a bad sign. It was. His garden is located at the western edge of the Denver metro area, in the rain shadow of Mount Evans; the garden receives, on average, 10 inches of precipitation a year. He eventually came to terms with this and now grows mostly bulbs, a few dryland plants, and the odd conifer. He is the author of *Penstemons* (1999), *Columbines* (2003), and *High and Dry* (2007)

**John Beaulieu** With a longtime passion for exploring the Niagara Escarpment on the Bruce Peninsula and the Carden Alvar in central Ontario, coupled with a horticultural interest in hardy geraniums and erodiums, it was only a matter of time before everything came together for John as an interest in rock gardening. Of course joining NARGS and other alpine groups only made the addiction worse. John loves sharing his photos and what he's learned in the club publications.

**Don LaFond** lives and gardens in Pinckney, Michigan, near Ann Arbor. He is a furniture builder and remodeling carpenter and, most importantly, a Mister Mom for two kids. Rock gardening has occupied and competed for his time for 25 years, with daphnes, irises, and dwarf conifers being among his many plant addictions. Don was a NARGS Director 2013 through 2016 and is currently the NARGS vice president.

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**Mark McDonough** is perhaps best known in gardening circles for his decades-long devotion to the genus *Allium*, garnering him the nickname of “the Onion Man.” However, Mark’s gardening interests reach well beyond that of *Allium*; his horticultural passions include plants and gardens of all types, including alpine and rock gardening, hardy succulents, wildflowers and North American native flora, with particular emphasis on woodland gardening. Mark’s latest area of serious study is *Epimedium*, building an extensive collection and developing his own hybridization program. Mark recently retired from a 40-year career in architecture and information technology working for architecture/engineering firms.

**Robert E. Swartz** was born with a chlorophyll addiction gene in a northern suburb of Detroit. His main botanical interest is propagating wildflowers. Being a retired analytical chemist has given him certain skills to pursue some of the technical aspects of propagation. Retirement has allowed him time to pursue his interests, but limited yard space has caused him to concentrate on a few specific species. He finds botany endlessly interesting.

**Front cover: *Raoulia bryoides*, Ger van den Beuken**

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Printed by Allen Press, 800 E. 10th St., Lawrence, Kansas 66044

NORTH AMERICAN ROCK GARDEN SOCIETY



*The Rock Garden*  
**QUARTERLY**

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*fall*  
2017

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*The Rock Garden*  
**QUARTERLY**

(ISSN 1081-0765; USPS no. 0072-960)

is published quarterly in January, April, July, and October by the  
North American Rock Garden Society, c/o Bobby Ward, Exec. Sec.,  
214 Ashton Hall Lane, Raleigh, NC 27609-3925  
a tax-exempt, non-profit organization incorporated  
under the laws of the State of New Jersey.

Periodicals postage is paid in Raleigh, North Carolina, and additional offices.

POSTMASTER: Send address changes to  
*Rock Garden Quarterly*, Executive Secretary NARGS, PO Box 18604,  
Raleigh, NC 27619-8604

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**Submission deadlines are**  
**February 1st for SPRING issue**  
**May 1st for SUMMER issue**  
**August 1st for FALL issue**  
**November 1st for WINTER issue**

Membership includes a subscription to *Rock Garden Quarterly* and  
participation in the seed exchange, as well as other benefits.

Annual dues: US \$40 for members in USA and Canada, US \$45 for all other countries. Payment  
by check on a US bank, International Money Order in US funds, or credit card (Visa, Mastercard).

**Membership can also be paid online with PayPal at**

<[www.nargs.org](http://www.nargs.org)>

Membership inquiries, dues,  
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# From the Editor

WHEN I MAKE a new bed in the garden, I have great plans. Big designs, carefully curated lists of plants, bloom sequences and color schemes... it is always perfect in my head. Then, of course, reality happens. Some of the plants I wanted I can't find for sale anywhere and in the process of going to every nursery in town to try and locate them, I instead stumble across a dozen other cool things that I buy on impulse. Once everything is planted some things die, others start seeding around, a rock isn't quite the color I had expected, and the final result ends up looking nothing at all like what I had initially planned. Delightfully, however, the unplanned, chaotic, real version of the garden is always far more beautiful, interesting, and appealing than anything I could have imagined. Perhaps this says something about my skill as a designer or perhaps there is something fundamentally beautiful about an errant seedling that just happens to land in the perfect spot.

It turns out that being editor of the *Quarterly* is very similar. For each issue I've got a grand scheme, articles that will complement each other and form a cohesive whole. These grand schemes have (so far) entirely collapsed, but what I've gotten instead is a really wonderful set of articles that work together to make a terrific issue of the *Quarterly* that is far better than I could have hoped.

In this issue, thanks not at all my planning, the articles have fallen into two distinct and complementary categories. The first four are all about rock garden construction and design, and the last four are focused on the plants themselves.

The design and construction section kicks off, beautifully, with an article by Lee Recca that serves as a perfect introduction to the others, a summary of all the ways the water, rocks, and plants interact visually and practically in the garden. Many of the themes she touches on then get expanded on in the next three articles as they dive in greater depth into different ways to build and design rock gardens that are both beautiful and terrific homes for special plants. All of these authors approach their gardens and design quite differently, sharing approaches that will work for each of us in our various gardens. It is also interesting to see what, despite their differences, they all do the same. It really seems like no matter your climate or style, starting a rock garden by building up with lots of sand and/or gravel is pretty much universal.

The second set of articles moves past the garden and rocks and dives deep into the plants. Again, here there is something for everyone. Ger van den Beuken's final installment in his series on cushion plants is packed with exquisite treasures that will set the most jaded plant

collector drooling, while Gary Whittenbaugh's piece cheers for the plants – including sempervivums – that are a lot easier to grow and are every bit as beautiful. Mark McDonough and Robert Swartz then both talk about plants they've grown from seed – from a few plants of a rare *Saponaria* to literally thousands of orchids. Both are perfect articles to get you inspired as we move into the next seed exchange season.

It has also been very fun, putting together this issue, to see all the events and tours we have coming up. General meetings in Raleigh and Newfoundland, the plantsman tour of China, study weekends, and traveling speakers. It is thrilling to see that this society is still so vibrant and active when so many other plant societies are struggling and going moribund. That isn't to say that NARGS doesn't have challenges as well, but we are very lucky to have great leadership who are working very hard to keep this society alive and relevant. The great thing about a society like this is that if you want to have an impact, you can. You can do anything from running for president to sending an e-mail with an idea for a great new program.

That invitation to get involved, of course, extends to my little part of the organization, this publication you are reading now. I want to hear from you! And that doesn't mean you have to write an article, though of course I'd love it if you did; any feedback and participation is always welcome. Many of you responded to my request in the last issue and shared your recipes and techniques for building troughs. I really appreciate everyone who took the time and I'm looking forward to compiling all of that information for the winter issue. If you didn't reply yet, I still want to hear from you! And if you don't have anything to share on the topic of troughs, I still want to hear what is on your mind. Please write me at [gsparrowgardens@gmail.com](mailto:gsparrowgardens@gmail.com) and tell me which articles you loved or hated, or what topics you'd like to see in future issues.

This Society and this *Quarterly* belong to us, the members. Pitching in, sharing ideas, and giving feedback will only make it better for all of us.







# Water and the Rock Garden

LEE RECCA

THERE IS A natural symbiotic energy between rocks and water in the landscape. Rocks preserve water, shading the earth and preventing moisture from evaporating. Rocks direct precipitation downward, oxygenate the water by creating motion and tumult, and work with gravity to accumulate the water into streams and rivers. The adage “Slow it, Spread it, Sink it” must have been coined by someone observing water flowing over rocks.

Water works its magic on rocks in the garden as well. By dissolving stone surfaces over time, water unlocks their mineral nutrition, and the smaller grains improve the tilth or texture of the soil. The chemical activity that allows plants to take up nutrients through their roots could not happen without moisture. Plants and trees act as hydroelectric pumps, delivering nutrients and moisture many meters into the air to their growing tips.

All this is achieved without human interference, but, over the centuries, cultivators have developed techniques that help rocks and water do their symbiotic work, particularly in hot, dry climates. With new water scarcities arising from climate change, many of these techniques are being revived, and rocks have important roles to play.

## Water Harvesting and Storage

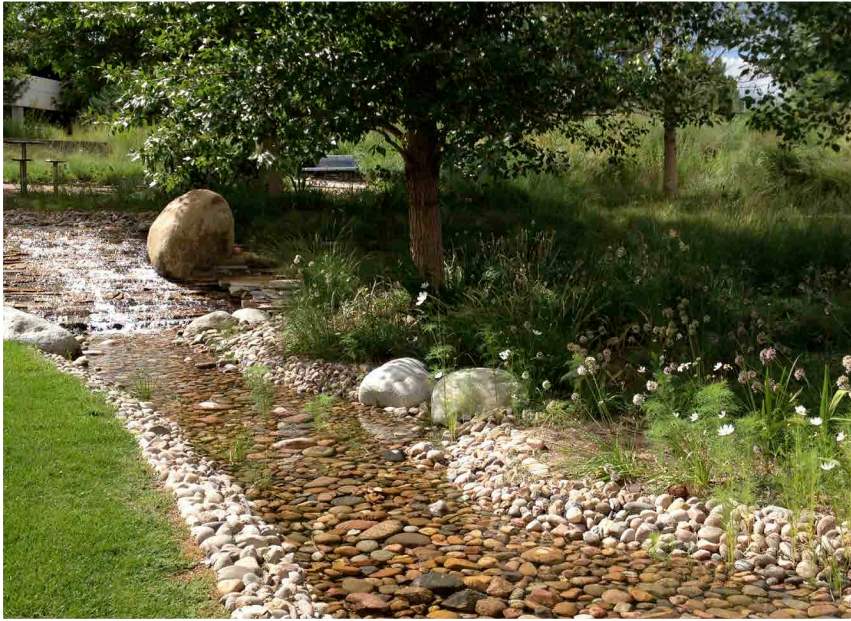
Beginning with large-scale water management, the ancients preserved water by using structures made of rock such as cisterns and catchment basins. Some of these structures, such as America’s Stonehenge in North Salem, New Hampshire, were complex and sophisticated. At the Santa



Robin Magowan and Juliet Mattila’s Santa Fe garden requires careful water management.

Fe, New Mexico, home of Robin Magowan and Juliet Mattila, an old cistern stands at the entrance, surrounded by native plants and shrubs.

Water baulies (stepped wells) were built chiefly in India to store and harvest water for community use. Today, such wells can provide niches for accommodating various aquatic plants that need different levels of



A swale, or arroyo, helps manage runoff and adds to the beauty of the garden.

submersion. Stepped ponds are similar but more organic looking and can be built entirely of rocks, with small waterfalls between the levels. Water features such as these with varying levels use gravity to keep the water moving, which helps the water stay clean and free of undesirable insects.

In the modern rock garden, channels, typically called swales in the East and arroyos or dry washes in the West, work not only to manage rain and snow melt but also to add interest to the garden with their curving paths and sloped banks.

Early settlers in the American West built elaborate systems of gulches, canals, gated sluices, and ditches. In my hometown of Wheat Ridge, Colorado, the ditch system is preserved and managed by a ditch company with city representation. Some of the ditches still have gates operated by a wheel mechanism capable of moving water uphill. Local gardeners incorporate these structures into their garden designs. A historic ditch is a prized amenity.

In the eastern U.S. and in the U.K., rain gardens are typically recessed, but in other areas they can be built up with layers of squeegee (rock smaller than peac gravel) or other crushed rock so that rainwater can percolate into the basin. See the example of Robert Nold's garden outside Denver, Colorado.

NARGS's *A Rock Garden Handbook for Beginners* (1999), T. H. Everett mentions "horticultural conceits, which sometimes included

grottos, arches, bridges, and other elaborate architectural features” in the early rockeries built by Victorians. Today, much more natural and functional garden structures are favored.



A preserved agricultural irrigation ditch as a landscape feature.

Some of the contemporary water management techniques include flooding furrows, curb cuts, French drains, micro-irrigation, wick irrigation, porous capsule irrigation (ollas), deep pipe, perforated drainpipe, and porous hose; all are methods to deliver water where it is needed or channel excess water away from sensitive plants. Both scenarios must be considered in planning a rock garden; even desert-like conditions can include the occasional gully washer.



This rain garden in Lakewood, Colorado is raised rather than recessed , but still functions to capture and preserve rainwater.

Portland, Oregon, receives abundant rainfall but there is a dry season. In the home garden of Scott Weber, sturdy rain chains channel rainfall from the roof into two large rain barrels to be stored until needed.

### Smaller Scale Water Management

Nurse rocks are called that because they are placed near sensitive plants to shade the soil and developing roots and prevent moisture and soil loss. A cover of gravel or crushed rock isn't just an attractive mulch in the garden; it functions well to retain moisture while allowing air to circulate. Rock faces channel water to the root zone in crevice gardens enabling plants to live in little soil. The Community Heroes Crevice Garden in Arvada, Colorado, is a shining example of rock's ability to capture and preserve water. Even in drought conditions, its plants are thriving. The garden was installed by the Girl Scouts and designed by Kenton Seth of Paintbrush Gardens, a well-known crevice garden pioneer.



Scott Weber's rain barrel preserves moisture for the dry season in his Portland, Oregon garden.



The rocks in The Community of Heroes Crevice Garden in Arvada, Colorado capture water to allow plants to thrive even in drought.

### Plant Selections

Discerning rock gardeners select plants that minimize moisture loss or channel moisture underground where it can be conserved. For instance, plants in the genus *Agave* have the capacity to collect and channel rainwater off their curvilinear leaves and are rightfully treasured by rock gardeners. Loree Bohl's garden in Portland holds a collection of agaves, cacti, and succulents. The fleshy leaves lend a sculptural

feel to the “danger garden” and stand out in Portland’s foliage-heavy landscape.

When your water harvesting works too well and you have wet, boggy areas, there are plants that love these conditions, including the Asiatic irises (*Iris sibirica*) and Joe Pye Weed (*Eutrochium purpureum*). Low-growing selections include watercress (*Nasturtium officinale*) and moneywort (*Lysimachia nummularia*). Many aquatic plants not only thrive in wet conditions but actually purify water, including most rushes (Juncaceae) and sedges (*Carex* species).

Rain gardens are soggy in the spring and may be dry in other seasons. There are many plants adapted to those conditions. Perhaps the high alpine plants should be avoided, but many other natives like having “wet feet” while they are sprouting and growing. I planted a native rain garden this year and, surprisingly, the most successful varieties are the burnt orange dandelion (*Agoseris aurantiaca*), flax (*Linum lewisii*), and Mexican hat (*Ratibida columnifera*), creating quite a colorful patchwork.



Whatever the style or setting, rocks in the garden are beautiful and functional.

# My Rain Gardens

BOB NOLD

ONE DAY, I decided I needed a rain garden. Everyone else was making one, and of course I wanted to be like everyone else, so I read everything I could find on how to build a rain garden.

I immediately encountered a problem. Rain gardens are usually designed as swales; rain falls, the swale fills with water, the water soaks into the soil, and the plants grow. While I often like to pretend I live in a climate where it rains at least occasionally, the reality of my gardening life is that rain falling in amounts which plants can use is rare. The garden here receives, on average, about 6 inches (15 cm) of rain between May and November. My swale would be empty most of the year. No plants would grow unless I ran the hose every day to fill my rain garden with water. I would look like an idiot.

I thought that clay soils held more water than more porous soils. That is what all the books say (books apparently written by people who can wake up to rain in the morning and go to bed with rain at night). In order to hold water, clay has to get wet, really wet.

The soil here, surrounding the house anyway, is heavy clay (subsoil trucked in from somewhere else, maybe hell) spread over the native creek bottom loam. The native subsoil is gritty, decomposed sandstone, probably derived from the Fountain Formation (Red Rocks amphitheater is not far away).

There are, in fact, a lot of plants more or less happily growing in the clay, but most were established back in the last century when rainfall was relatively more frequent. Times have changed. In this century it has been almost impossible to establish new plants without a considerable amount of irrigation; plants grown in small nursery pots die within days if I forget about them.

When I dug holes for the plants in the front yard (often using a pick), I dug down to the gritty subsoil to give the roots somewhere to grow.

I also did drainage tests by digging holes, pouring water in them, and timing how long it took for the water to disappear. It took seconds, no matter where I dug. I didn't see the point in this, even though books said to do it. I had encountered innumerable references to "drainage," as in "sharp drainage" or "well-drained soil" (utterly meaningless uses of the word in a dry climate like mine). Why on earth would I want water to drain away from plant roots? The plants would die. "Sharp drainage" was especially mysterious; I envisioned the existence of a group of plants which grew without any water at all. Maybe it was magic.



One of the author's dry climate rain gardens.

I understood that clay soil has less oxygen available to roots than more porous soils do, and that I was supposed to dig in lots of organic matter in order to “open up” the soil which would simultaneously hold water and allow it to drain downward. Maybe not exactly simultaneously; maybe the organic matter would hold enough water for roots to get what they need before the water went down to the place where water goes. Or maybe it made no difference, because I didn't have an irrigation system, and there wasn't enough rain. A quarter inch (0.6 cm) of rain falling on my nice “improved” soil had no effect. The plants wilted. By the time I remembered them, they were dead.

Something was amiss.

It turned out that something I felt intuitively was supported by actual soil science, namely, that heavy soils, in contrast to more porous soils, are almost impossible to wet in arid and semi-arid climates. What I discovered was something called the “Inverse Texture Effect Theory.”

Soil texture is of large importance as it affects both infiltration and the movement of wetting fronts. Fine-textured soils that are high in clay and silt fraction tend to impede infiltration, in which wetting

fronts move only very slowly, and surface evaporation after rainfalls can be very high. More coarse-textured soil rich in sand fractions (like sandy loam, for example) is characterized by high infiltration rates and rapid percolation. For this reason, coarse-textured soils are often better for plant growth. As this is in contrast to soils in mesic areas where fine-textured soils are commonly considered to be superior for plant production, this is called the “inverse texture effect” (Jorgensen, S.E. and Fath, Brian 2008 *Encyclopedia of Ecology*, Vol. 1, p. 884).

The term “inverse texture effect” has been proposed to indicate that in arid regions, coarse-textured soils have more useable soil moisture than fine-textured soils. Coarse-textured soils hold less water per unit depth, but much of the water in arid regions is sufficiently deep to avoid evaporation, whereas in fine-textured soils most of the water from small infiltration events is easily lost to evaporation. (This concept and supporting information presented by I. Noy-Meir, 1973, *Desert Ecosystems: Environment and Producers. Annual Review of Ecology and Systematics* 4:25-51).

My wetting fronts went nowhere. There were no infiltration events. The water falling on the clay soil simply evaporated.

But back to my rain gardens. I knew that creating a swale would be completely pointless, and even though I do a lot of pointless things, this seemed excessively pointless. The plants I wanted grew in highly porous soils in their native habitats; brief thunderstorms supplied the rain, almost all of which went straight into the soil down to the roots.



A rain garden built up instead of down effectively harvests water in dry climates.



I figured that must be what gardeners meant by “really sharp drainage.” If percolation, the correct word for this process, were used instead of “drainage,” everything would have made sense.

So I built my rain gardens up instead of down, with raised beds of sand and gravel, which would provide the high soil oxygen many xerophytic plants require and allow water to percolate down to the roots. I also wanted to be able to grow some “monsoonal” plants like agastaches, which are dependent on late-summer rains and also grow in porous soils to capture that rain. Some depth was needed for roots to grow; there was no concern that the roots would grow down into the heavier soil below, because water in the gravel would be more readily available to roots.



Xerophytic plants thriving in a rain garden built of sand and gravel.

I might have given more consideration to the possibility of a perched water table at the base of the raised beds, but since the garden slopes downward (more than three feet (1 m) down, over a distance of ninety feet [27 m]), I thought this would take care of the problem. I was partly right.

The first bed was made about 3 feet (1 m) high, and 15 feet (4.5 m) long. I had some old tire rims, chunks of concrete, and a collection of bound *National Geographic* magazines which had been gathering mold in the crawl space to make the backbone of the first bed. The gigantic pile of gravel looked pretty ridiculous sitting there in the middle of the garden, but design is not one of my strong points.

It turned out that planting in the gravel is no picnic. Aside from the obvious difficulty of digging holes in sand and gravel, the plants' roots wanted to remain in their peat-based root balls, so long as the peat was wet. Making sure the root ball stayed moist was a daily and fairly boring activity. There was no incentive for the roots to grow downward, which is what they would have done in real life.

So I removed most of the peat-based root ball, either by soaking in a dishpan filled with water and gently teasing away the peat or by washing off as much of the peat as I could using a watering can and then backfilling the hole. The plants still required almost daily watering to get the roots growing downward, but eventually a small percentage of plants did just that.

A brief thunderstorm dropping a quarter inch (0.6 cm) or so of rain every so often or a sprinkler set for 15 minutes every few weeks is sufficient to keep the plants alive during the summer. Some plants even flower.

My next rain garden was much smaller and only about a foot (30 cm) high. I found that the distribution of water within this pile of gravel was different; the gravel was dry right at the top, as I would expect, but toward the bottom, where it abutted some thick flagstone paving, a sufficient amount of water collected. This allowed me to grow plants like *Teucrium aroanium* (the genuine species) and *Erigeron scopulinus* without having them completely dry out, as they did when planted in the old raised beds made of clay.



The sand pile garden is mostly dormant now, but is full of bulbs below the surface.

The next rain garden I made has been a good deal less successful. This is a pile mostly of sand with some gravel added, about a foot (20 cm) high and 10 feet (3 m) long. The top “crest” of the bed is dry about 6 inches (15 cm) down, but snow on this bed melts long before it does anywhere else in the garden, with the result that there is water lying down in the sand in winter rotting any bulbs planted in just the wrong location. A few phloxes, some *onocyclopus* irises, and Iranian alliums have found the bed amenable, but since the bed quickly becomes free of snow in mid-winter, conditions tempt plants like the juno iris, *Iris rosenbachiana*, to try to flower—in January. This is a very foolish thing for a plant to do.

It can be depressing to lose plants acquired with difficulty and expense, so I moved the rest of the junos which were unable to control their desire for flowering at the wrong time of the year into a raised bed, which is the antithesis of a rain garden. It is, if anything, an anti-rain garden, a mound of the most awful dirt imaginable, piled about two feet (0.6 m) high but located in a part of the garden where snow remains longer and the soil remains cold until the middle of March. There, the junos flower in April, none trying for an early record by emerging in the second week of January.

It is ironic that descriptions of this last bed, just a large pile of dirt from excavations made in the last century (I forget what I was digging for), is the one which drives gardeners crazy. Surely there has to be some drainage. But remember the “impeded infiltration” in the first quote, above? A large percentage of bulbs in dry temperate climates grow in soils just like this: impermeable to rain during the summer and autumn, frozen (about half an inch [1.3 cm] deep) in the winter, and only provided water, from melting snow percolating down into the soil, in spring.

So now I have rain gardens. I have no rain, but at least I have the gardens.



Juno iris thriving in the ‘anti-rain garden’ which provides exactly the conditions they require.



# One Man's Rubble is Another Man's Rock Garden

JOHN BEAULIEU

THROUGH THE PAGES of *The Rock Garden Quarterly* and other excellent club publications, newsletters, and of course internet postings, we get to see a lot of fantastic rockeries, many of which are realistic models of what our plants might be growing in if they were in their natural habitats. The best examples are constructed with one kind of rock, and most often this is purchased stone, which can be quite expensive. I've never had the budget to do that, so my rockeries have been built with what I can find and scrounge. Some are made with mixed "road rocks" and boulders that I was able to dig from the back of the property. My favorite rockeries are crafted with only limestone that has been collected over many years, and these tend to house my favorite erodiums and rarer alpine geraniums.

I'm not one to pass up an opportunity to acquire more rock or even broken concrete for that matter. I have made wonderful, natural-looking walkways through my rock gardens using pieces of a neighbor's old sidewalk when they replaced it a couple years back. You can just imagine my excitement last summer when a house just a few doors down ripped up an old cement patio and piled the rubble out in their driveway!

We have read in the *Quarterly* that larger public gardens have been making use of concrete slabs (urbanite) to create large crevice gardens. Some heavy equipment is usually required for this, but on a smaller scale the backyard gardener can create something useful with nothing more than a sledge hammer and a two-wheel hand dolly.

My neighbors were quite happy to let me have the rubble, since it would have been quite a cost to have it disposed of. I prepared myself for many trips with the wheelbarrow once I got it all smashed down to manageable sizes with a sledge hammer. The fellow doing the work was so happy to have the pile gone, that he offered to run it up to my place with his forklift if I piled it all on skids/pallets. You don't have to tell me



Concrete rubble from a neighbor's demolition project.

twice. I soon had it all sized and piled, filling 6 skids. This was naturally during the hottest portion of that summer's record heat wave.

I had an area in mind for this new outcrop. It would be along a garden path, under a tall blue spruce (*Picea pungens*) that had been trimmed way up. Not much was growing there, and the spot had been taken over by ditch lilies (*Hemerocallis fulva*) and comfrey (*Symphytum officinale*). A little site prep was required, removing what I could of the weeds and laying down lots of cardboard and paper as a weed barrier. The basic design was going to be a curved (along the path) raised bed with another smaller raised bed in the center. The center walls would have to start at the same foundation level to prevent it eventually sinking down into the larger bed.

Although 6 skids sounds like a lot of concrete, it does not go as far as one might think. I'm sure this is well known to those who purchase stone. For the lower foundation courses of the inner wall



What looks like a lot of stone doesn't go as far as one might expect.

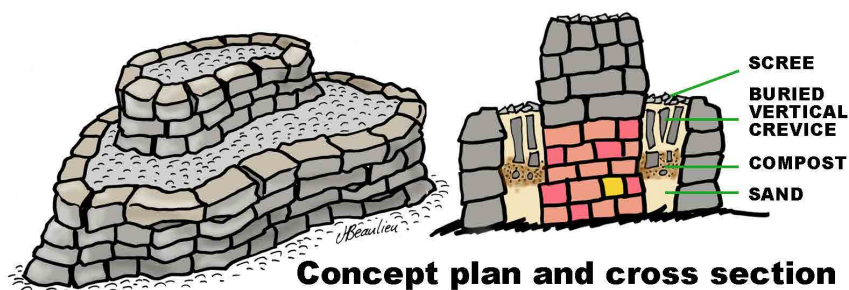
I used a lot of old brick and interlock pavers, to save on using my limestone-like concrete. The bottom half of the inner structure is buried by the outer bed and will never be seen anyway. I started filling up the outer ring with wonderful golden sand, easily dug from another area. Our property sits on an ancient sand dune which, in most areas, is only 12 inches (30 cm) below our topsoil.



Simple tools were all that was required to build this rock garden.

Special tools or heavy equipment were not required for this project. The most important tool was the sledge hammer, which allowed me to get the few really big slabs into a size that could go on the skids. Needless to say, safety glasses and work gloves are a must. Getting the pieces from the skids on the driveway to the site involved what I call my 'two wheelie', a sturdy hand truck, which has been used many times for hauling rocks that I dig up in the back forty. Although not as needed for building wall-type rockeries, my extra-long crowbar also came in handy for shifting larger sections. It also helped in levering big pieces onto the two-wheelie.

This new "outcrop" (my name to differentiate it from other rockeries) does not appear as a vertical crevice garden, but hidden below the eventual surface scree of the first ledge are vertical pieces of mortar and brick that create the same benefits for root growth. All too often, the novice rock gardener is not aware of the benefits of the rock structures buried beneath the surface for root growth. A few rocks scattered among your plants does not make a real rock garden. Although mostly filled with sand, I did add areas of nutrient-rich compost for the roots to grow down into. I laid this layer of compost down just below those vertical pieces being added in above photo. There is sand below and sand with some crushed limestone added



above the compost. Good drainage is important, but I still wanted a layer that would hold some moisture, as the location is sunny and dry (due to that big spruce above). Not all my plants will be true alpine and this little bit of moisture retention and nutrient will help them without hurting the true alpine that like a sparse substrate.

As I approached the top row for both the outer and inner walls, I dressed them with real limestone rock that has the same grey coloration as the concrete, adding to the illusion that the concrete wall might be a limestone cliff. It was more of a challenge to fit these together in a natural way than the laying of the fairly straightforward slabs. Perhaps not all that convincing before planting, once I added some trailing plants, some sedums tucked in here and there, and some of the cracks caulked with moss (sun-loving moss from my garage roof), it took on a far more natural appearance.



A jigsaw puzzle of limestone rocks finish off the top of the rock garden.



Limestone scree added to the top of the garden (inset) mimics the natural scree seen on local limestone cliffs.

Once the walls were topped with the real rock, I covered the ledge around the structure and the very top of the upper raised section with limestone scree inspired by the scree seen on natural cliff ledges in the area.

I am not the purist alpine gardener, growing only the most sought after alpines. I don't grow those perfectly mounded cushions. My main interest is in hardy geraniums and erodiums, and I had plenty of alpine-type geraniums and erodiums grown from club seed distributions waiting in pots for the outcrop to be finished.

I have been surprised how many erodiums have proved hardy here in central Ontario. One of the hardiest, and best known, is *Erodium manescavii*, but I have also found *E. acaule*, *E. cheilanthifolium*, and the *E. chrysanthum* hybrid 'Moonman' to be hardy in my rockeries for several years. Also planted in prime locations are hardy geraniums that have their background in alpine conditions, such as *Geranium farreri*, *G. argenteum*, and the various *G. cinereum* varieties.

My rockeries include a lot of plants that would not be considered rock garden plants by many standards, but yet they thrive taking advantage of the good drainage while enjoying the retention of cool moisture under the rocks, even if at first that sounds like a contradiction. Every year I do get more adventurous and order more true alpines to experiment with. It is good that NARGS is very inclusive for those of us that also grow a lot of other shrubs and perennials. After all, those beds of daylilies and hostas provide a great backdrop for the rock gardens.





The finished garden newly planted up with seedlings and moss.

Once my initial seedling planting was done, I fiddled with some cosmetic details to help naturalize the appearance. I caulked some moss into some spaces, added a few sedums and sempervivums to spots on the wall, and stuffed in some of the concrete scree that I created by smashing up the large slabs. Again, these small pieces mimic the limestone cliffs that I'm always exploring in this region.

On the shady backside of my outcrop, I left an area flat, so I can place some pots or troughs there. And behind that, I actually did a few exposed rows of concrete in a vertical style. Right up against the last vertical row, I place pots of sun-loving erodiums. The pots are in fact in the shade of the last row of stone, so the potted plants get the light they require but the pots themselves stay cooler. Also along the first ledge on the north side I have planted some hardy gesneriads (*Ramonda spp.*) that I have grown from seed. They came through their first Ontario winter (USDA zone 4) just fine in that location. This was actually their second winter, as the first was spent in a terrarium. They had looked too tiny to put outside. They are such slow growers!

There is good snow cover in our area for most of the winter, and the early-spring sun warms the rocks. I did worry a little when this happened, and the rockery was bare long before the rest of the garden. Not a problem, I soon was to see signs that all my plants had survived, and now I was ready to add even more! I'm the kind of gardener that can't leave a space unplanted. My outcrop is now a jungle like the rest of my gardens, rockery or otherwise. The neighbors came by to see what had become of their old patio. I have so many plants there that they could not believe that I had used all the rubble! Hmmm, maybe I should call it "Rubble Ridge?"



The finished garden in spring following its first planting.



# The Plant Junkie's Guide to Rock Gardening Basics: Make a Pile of Sand

DON LAFOND

THE BRITISH HAVE influenced America throughout our history, from their arrival in Jamestown in 1607, to a little misunderstanding in 1812 and the Brexit in 2016. The Brits exported some very nice cars: the Jaguar, the Rolls Royce, and the Land Rover. Their kids in the '50s took notice of our original blues and jazz music and sent back four hairy bugs and five rolling rocks to play our very own music reinterpreted back to us (thanks for that). They also wrote most of the books to tell us how to build our rock gardens. Well, we rebuilt Washington DC, we made the Cadillac and the Jeep, Jimi Hendrix showed us all how to play the guitar, and the Doors lit a fire. But, with few exceptions, there is not a whole lot written by American writers about how to rock garden in our North American climate. There is one not so obvious exception: the articles published in our *Quarterly* over the years, which, by the way, are all readily available for free on the NARGS web site.

Whatever your climate, you can have a rock garden. The climate in Britain really couldn't be more different from ours. Although the precipitation is different throughout the islands, Britain's climate is relatively mild and fairly moist. In the continental U.S. and Canada, we go from about 2.65 inches (6.73 cm) of rain a year in the Sonoran Desert to 137 inches (348 cm) in Washington state. Then there are the frost free southern areas around the Gulf of Mexico and southern California, which are quite different from some places in Ontario and Michigan where temperatures can dip below -50° F. Some places have good snow cover; others don't. Most generalizations about how to garden won't be accurate for North American gardeners. That doesn't mean we can't have a rock garden in most places in North America. It just means we all do it differently. One possible way to determine a rock gardener from another sort of gardener is the stubborn determination to grow a plant in a climate that the plant hates. And with enough of that stubborn determination, you can even rock garden in the South. Ev Whittemore does it, John Willis does it. The question becomes, "Do you want to?" With all the lovely plants you can grow in the South that I can't here in the North, like *Magnolia grandiflora* and all the camellias and the, well.... you know; do you want to include a rock garden?

Opposite: Rock gardens can be made in any climate, even in the South, as demonstrated in Ev Whittemore's North Carolina garden.



The dry climate of Denver couldn't be more different than North Carolina, but great rock gardens are possible everywhere.

I vote yes. I can hear you all saying it's too hot and too wet for a rock garden in the South. In Michigan we get over 40 inches (101 cm) of rain a year and lately more in December and January instead of snow. We go to 90-95° F (32-35° C) regularly for days and weeks and 100° F (37° C) isn't uncommon, and all this with nearly 100% humidity. The difference is your heat and humidity lasts more calendar days than ours does. But even the southern queen of gardening Elizabeth Lawrence says you can rock garden in the South. She wrote a whole damn book on it. She said "All gardeners become rock gardeners if they garden long enough." and "One by one, special corners are singled out for special treasures, until they become so numerous that they must be drawn together." As I have written before, "A rock garden is mostly about scale." In her book, *A Rock Garden In The South*, Ms. Lawrence named, by my very rough count, 300 species of plants she grew in her garden or that she saw in other southern rock gardens. So yes, whatever your climate, you can have a rock garden.

I have had the pleasure of spending a fair amount of time in the Canadian and American West, mostly in the highest of places I could get to. When I was younger I wasn't a rock gardener but a backpacker. I remember climbing in very loose scree, two crawling steps up and one step sliding down. I didn't pay much attention to the plants except the odd scrubby bush that could help propel me up the side of the

mountain. Later, as a gardener I would, and still do, spend a little time digging in the area I'm visiting to see what the plants are growing in. Invariably I find a heavy clay-based soil under varying thicknesses of gravel and stones. The incline and the wind drain excess water from the surface and the stones and gravel keep the necks and green parts of the plant out of the clay at the same time keeping the soil at least somewhat moist. Stone and gravel are very effective as mulch.

I have found in Michigan that plants don't grow well in very dry soil, with the obvious exception of xeric plants like cactus. This might not be so obvious. Rock gardeners are always saying rock plants need good drainage, but that's not the same as as dry as a bone. It needs to be dry around the neck of the plants and moist at the roots.

So make your own slope in your flat, clay-soiled yard. Yes, that's right, dump 5 or 10 or 15 cubic yards (4.5 to 13.7 m<sup>3</sup>) of builder's sand right on top of the grass in the spot you always wanted to have a rock garden.

Next, shape that big pile of sand into something that pleases you. You could be done and ready to plant right then. Or you could let rain fall on it to erode the pile of sand to the point where it stops spreading. The rain, simply by falling on the sand, will create a lovely mulch out of the small rocks that are mixed in the sand.

My guess is most of us won't be able to be that *laissez faire* about the situation. You're on your own on what to say to your lawn-loving mate and the kids who want to play baseball in that spot. Maybe try to explain how a lawn is a desert in terms of biodiversity (see Mr. Tallamy's article in the *Quarterly* volume 75/2).

What about rocks? Depending on the amount of rocks you have, you may only have enough to plug areas of bad erosion that will become obvious as you observe the sand pile. That's okay because clustering rocks together is the best advice I have for a limited rock pile and a large rock garden. Farrer says to bury two thirds of the rock in the soil. That makes good sense, especially when you walk on the rocks. Some sort of edging will be useful to keep the sand from spreading beyond where you want it to be. That edging can be some treated wood or railroad ties laid down and secured or the edge of the sidewalk or



Starting a rock garden can be as simple as making a pile of sand or gravel.



Kathy Allen's Oregon garden shows that you don't need many actual rocks to make a beautiful rock garden.

the block foundation of your house. Just keep in mind to slope the sand away from the house at least 10 inches to 1 foot (25-30 cm) and keep a minimum of 8 inches (20 cm) of clearance between the siding and the ground. Another nice addition to your rock garden might be to put a landscape cloth barrier down between the grass and the pile of sand (obviously do that before you dump the sand). Worms bring up soil and castings and mix it with your nice clean sand; the barrier slows that process down. But, alas, that also stops plant roots from growing through the sand and reaching the mineral-rich soil below. Not that the plants must do that to grow. Every action has a consequence, so it's up to you Ms./Mr. gardener. Experiment away!

I think a very effective way to include a rock garden within a larger garden is to think in terms of small vignettes to work into the larger garden. To start, find a smallish spot that is on a corner of a bed, not directly under a tree. Have it facing north or maybe east in a place that you could incorporate a foot or two of sand ideally with a slope to help drain water.

What about rocks? If you look a bit, you can find small amounts of stone for free. In my travels, I very often see a lot of rock right on the side of the roads. I always bring buckets when I travel by car just for the purpose of collecting rocks and embarrassing my traveling mates, much like trash-picking with the kids in the car. Bring it home and if the rock is flat shove it in the sand on edge in a way that resembles books lined

up on a shelf, put a bit of a slant one way or the other. Push the rocks as close together as possible (using a rock hammer is not cheating). Make sure that each end of the rock does not line up with the one to the right or left of it. Or, if the rocks are odd shaped, arrange them in a way that creates small crevices with a minimum of space between the crevices and only the tops of the rocks showing. Next, fill in the small crevices with more sand and fill the ends with slim wedges of rock so all the sand doesn't wash out with the first big rain storm that falls on the garden. This is a crevice garden, and it doesn't have to be very big. A 4 foot (1.2 meter) square space can have a lot of little plants in it. You can look to Kenton Seth's blog, "I Need A Cup Of Tea", or Stephanie Ferguson's award winning two-part article in the *Quarterly* on her outrageous garden in Calgary for more on crevice gardening.

I, like you, am part of a small community of plant collectors that is spread across the world. I think we need to expand our vision of ourselves and our club. Just because we call ourselves rock gardeners doesn't mean we only grow rock plants. When I visit a garden and talk to the gardener I can tell if they are a rock gardener even if they don't have a rock garden. It is an attitude, not nose in the air stuffy, but a realization that they garden for themselves. They are like, an artist who could no more stop making their art than stop breathing. I have a little sign in the garden that says Stay Calm and Keep Gardening, a sentiment I agree with wholeheartedly. And for the budding rock gardener, perhaps it could be amended to read, Stay Calm and Make a Pile of Sand.



No matter your climate, you can make a fantastic rock garden, like Jacques Thompson's Michigan garden, shown here.

# Cushion Plants

## Part 4: Raoulia - Vitaliana

GER VAN DEN BEUKEN

**The final installment on this four-part series covers some beautiful plants ranging from the rare and difficult to the accessible and easy, with something for every rock gardener.**



*Raoulia eximia*

### *Raoulia*

This genus contains about 20 different species endemic to New Zealand. We saw *Raoulia bryoides* on the Black Birch Mountains in dry, extremely cold, windy conditions. It makes grey cushions often confused with *R. mammillaris*. I tried to grow it from cuttings but did not succeed. It seems to be a short-lived plant in cultivation and needs some protection from hard frost.

Another stunning species is *R. eximia*. It's one of the most beautiful cushion plants and is native only on the South Island of New Zealand on stable rocks and screes. You can grow

this species in an alpine house with the right climate conditions, but you need to be very patient as it takes at least 15 years to grow from a seedling to 4 inches (10 cm) in diameter. At this moment, I have a few two-year-old seedlings that are only 0.4 inch (1 cm) across. The plants are hardy but need a very well ventilated spot and some shade during hot summers. They grow well in a mix of fine peat, seramis (a baked clay product often sold for use in orchid media or hydroponics), perlite, and sand. Some other extraordinarily beautiful species worth trying are *R. mammillaris*, *R. buchananii*, and *R. rubra*. The easiest and most common species in cultivation are *R. australis* and *R. subsericea*.



### *Saponaria pumilio*

Native to rocky slopes and screes in Turkey, *Saponaria pumilio* is a very dwarf species forming cushions that reach a maximum 16 inches (40 cm) across and an inch (2.5 cm) high. The short, hairy flowering stems bear purple, crimson, red, or occasionally white flowers. This species does very well outside in a sunny place in neutral to acidic soil. Propagation is from cuttings during spring or summer or from seeds, if available.



*Saponaria pumilio*



*Saxifraga cochlearis*

### *Saxifraga*

It would be easy to fill up an entire NARGS *Quarterly* with this diverse genus which contains the most fantastic and stunning species and cultivars for the rock garden, trough, or alpine house. However, I will try and limit myself to the species which have made the strongest impression on me over the years. The genus contains 15 sections, but the most interesting cushions are found in the *Ligulatae*, *Porphyrion* and *Saxifraga* sections.

*Ligulatae* or encrusted saxifrages are very welcome plants for the sunny and drier places in the rock garden. All *Ligulatae* species require a limy substrate in the open garden in full sun. Propagation is very easy by taking the individual rosettes and treating them as cuttings anytime of the year. *S. callosa* forms mats of silvery rosettes and has two subspecies, *S. callosa* ssp. *callosa* from the Alps and *S. callosa* ssp. *catalaunica* from eastern Spain and southern France. Both forms bear crystal white flowers on 1-foot- (30-cm-) long stems. *S. cochlearis* grows in the French and Italian Alps and makes nice cushions of heavily lime-encrusted rosettes bearing white flowers on red stems. It's a very nice garden plant. A small form named *S. cochlearis* var. *minor* is much more compact and ideal for the trough. *S. crustata* from the Julian Alps in northern Yugoslavia and the Dolomites is a pretty species with silvery rosettes and a very decorative inflorescence.

The most common species in the *Ligulatae* section is *S. paniculata* with all its subspecies, forms, and hybrids. However, the most beautiful form is *S. paniculata* 'Minor'. It's a perfect and easy plant for the trough and is most impressive on tufa where it grows very compact and



*Saxifraga valdensis*

slow with short stems bearing white flowers. *S. valdensis* is different and a very slow and demanding species from the southwestern Alps. It makes hard, tight cushions and grows in rock crevices. If *S. cochlearis* is growing in the same area, you may find nice hybrids between the two. One of these hybrids is named *S. pseudovaldensis*. The alpine house should be the best place, but I grow it outside in tufa without any protection.

From the *Saxifraga* section, I have long grown *Saxifraga exarata* and *S. pubescens* ssp. *iratiana*. Both are doing well outside and make a good display in sheltered, shaded places in moist but well drained and pH neutral soil. Both must be regularly re-propagated by



*Saxifraga exarata*

cuttings. *S. pubescens* ssp. *iratiana*, native to the Pyrenees Mountains in southwestern Europe, makes a particularly nice dome of flowers as a specimen pot plant with individual flowering stems reaching about 2 inches (5 cm) long, bearing pure white flowers. *S. exarata* is endemic in acidic soil in the Alps, Apennines, Balkans, Caucasus, and in Turkey. As a pot plant it makes a nice cushion and can be covered completely with creamy white flowers.

Another attractive species named *S. magellanica* comes from Patagonia. It is one of the few South American saxifrages, with a range extending along the Andes from Tierra del Fuego to Peru. It is a polymorphic species, varying considerably in shape and size, though the flowers are consistently white on 1-inch (3-cm) stems. Some plants are growing in a few botanical gardens and private gardens, but it is not an easy plant to keep in a good state over a long period. Propagation is by cuttings or seeds, if available. The substrate needs to be acidic, as is common for South American plants.



*Saxifraga magellanica*

Finally, we reach the *Porphyron* section, which includes some of the most spectacular cushion plants in the genus. It's impossible to describe all the many different species in the section, therefore I will

confine myself to the most impressive and beautiful species.

*S. aretioides* occurs only in the Pyrenees and the Cordillera Cantabrica in southwest Europe. It forms dense compact cushions with clear yellow flowers on 2-inch (5-cm) stems. It is not an easy plant in cultivation, but the best spot to



*Saxifraga burseriana*

try is on tufa protected from bright sun and kept well watered during springtime. *S. burseriana* is a widely spread species over the eastern limestone Alps and is enormously variable. This summer in the Julian Alps we found at least 5 different forms in a very small area. Good forms in cultivation are the subspecies *crenulata*, *crenata* and *cordata* and the cultivar 'John Tomlinson'. They grow best on limestone, especially tufa. This species is completely hardy and does not need any overhead



*Saxifraga ferdinandi-coburgii*

protection, but appreciates a place in the semi-shade. *S. ferdinandicoburgi* is another highlight from the Pirin and Rhodope mountains in Bulgaria. This plant has golden yellow flowers, and the cultivar 'Drakula' with slightly larger flowers and nice, bright-green prickly leaves is very promising.

*Saxifraga kotschyi* is surprisingly a rare plant in cultivation. We found this species in the Kackar Mountains in Turkey in narrow limestone crevices at an altitude of about 8000 feet (2500 m). The plant makes very hard cushions sometimes 19 inches (50 cm) square and covers itself with short-stemmed, bright-yellow flowers. I grow this species in full sun on tufa, and it is easy to propagate from seed.



*Saxifraga vandellii*

In the Corno Bianca in Italy I remember seeing the fascinating cushions of *S. vandellii* growing on the steep limestone rocks. This classic rock plant seems to be rare in the wild. It forms hard cushions of rather sharply pointed leaves that contrast very attractively with the crystal white flowers. The best place to grow this species is on tufa, but it will also grow happily on limestone or in a trough. Propagation is done by cuttings, but the results are often disappointing and very slow.

Since 1996, a few interesting and beautiful species from the Caucasus have been introduced to cultivation. *S. columnaris* has very tight, silvery, columnar foliage and bears beautiful red-purple, stemless



*Saxifraga dinnikii* (left) and the large-flowered selection 'Grandiflora' (right)

flowers. This plant is very rare in cultivation and is best grown in an alpine house. Another very attractive species is *S. dinnikii*. The plant is much easier in cultivation, growing in the wild in the north of the Caucasus mountains up to around 1000 feet (3000 m) in elevation. In early spring the stemless, lilac-purple flowers appear on the dark green rosettes. *S. dinnikii* 'Stasek' has always been described as the form with the largest flowers, but this has recently been outdone by a much bigger-flowering seedling I raised named 'Grandiflora'.

*S. x dinninaris* is a natural hybrid between *S. columnaris* and *S. dinnikii*. The hybrid, like *S. dinnikii*, is a superb plant for outside on tufa in a semi-sheltered place. Propagation is easy from cuttings in early summer, and if seeds are available you can make a try, but it takes some years to get plants to flowering size.



*Saxifraga andersonii*

For the past four years I have had a new species of saxifrage in cultivation collected by a plant friend on the Baltoro Glacier in Pakistan. It flowered last year for the first time and is a really stunning plant, very compact with stemless, pale pink flowers. Another plant friend brought me cuttings from Tibet of *S. ludlowii*. Last year it flowered for me for the first time. The plant resembles *S. lilacina* with stemless, dark pink flowers. I've grown it so far in my alpine house in a mix of equal parts peat, pumice, and seramis, but next year I will try it outside on tufa. Propagation from cutting material is easy.

Several interesting species of saxifrages have been introduced from the Himalaya, many by Ron McBeath, who introduced species from Nepal during the Edinburgh expeditions. One of these is *Saxifraga andersonii* from southwest China and Nepal with white flowers and nice lime-encrusted rosettes. It makes beautiful cushions and deserves a spot in semi-shade on tufa.

*S. lowndesii* forms a loose mat of leafy stems with brilliant, solitary, deep lilac flowers. The species grows in Nepal at 13,000 feet (4000 m) or higher among steep wet rocks. The species is in cultivation and is easy to propagate from cuttings. Cultivation, however, is difficult. Infection of mold in particular can kill plants rapidly. The substrate I use is well-drained with equal parts of sand, perlite, and peat.

I have had very good experiences with *S. matta-florida*. It forms a hard cushion of small green rosettes with stemless, white flowers. The plant is native to Tibet and China where it grows in moss on wet cliffs at altitudes of more than 16,400 feet (5000 m). Propagation is from cuttings in the spring and cultivation is possible outside on tufa or in deep pots in the alpine house.

### *Silene acaulis*

This species in the Caryophyllaceae has a wide range all over north and central Europe at altitudes from 5,000 feet (1500m) up to more than 10,000 feet (3000 m). It makes mats sometimes more than a half meter wide with stemless, pink flowers. It is not difficult to grow, but can be shy flowering. The only form with good flowers is 'Francis', which, unfortunately, is not seen so much nowadays in the nurseries.



*Silene acaulis*



*Tarasa humilis*

***Tarasa humilis***

Hailing from the central and southern Cordilleras in Argentina and Chile, *Tarasa humilis* is a wonderful mat-forming plant in the Malvaceae. In the wild it grows primarily on stony soil or on dry steppes. The solitary flowers are 1 inch (3cm) in diameter and can vary in color from intense crimson to pale pink. This species can be grown in the alpine house, but one of my plants survived 2 winters in the open rock garden without protection in well-drained, acidic soil.

***Thlaspi rotundifolium***

From the limestone mountains of eastern France to Italy and northern Yugoslavia comes *Thlaspi rotundifolium*, a lovely member of the Brassicaceae. The most perfect plants we have seen were in the Dolomites on a lime scree. When happy, it forms big mats completely covered with

almost stemless, honey-scented, purple-to-pink flowers. This plant is very rarely offered by nurseries because it's an almost impossible species to keep alive in the garden, although propagation is very easy from seed.



*Trachelium asperuloides*



### *Trachelium asperuloides*

This plant is member of the Campanulaceae, endemic in southern Greece and growing in limestone crevices. This is a neat cushion-forming evergreen species for the alpine house which can reach a size of 8 to 12 inches (20 to 30 cm) across. It flowers in late July with beautiful lilac-blue, stemless flowers. It requires a well-drained, limy substrate. The best way to propagate this plant is from seeds, but these are very rarely offered, so you can take cuttings of the new shoots in late summer.

### *Verbascum acaule*

From the

Scrophulariaceae family, *Verbascum acaule* is native to southern Greece, growing at high altitudes in limestone crevices. This is a rosette-forming species with very coarsely ovate leaves, producing flowers that are almost stemless, yellow but red in bud, and more than 0.7 inches (2 cm) in diameter. Propagation can be done by seeds or from root cuttings during winter. It desires a very well-drained, limy soil and a place in the alpine house.



*Verbascum acaule*

### *Veronica caespitosa*

This little veronica is a cushion-forming species reaching to about 10 inches (25 cm) or more across. It's not an easy plant to please, but with protection during winter, it is possible to keep it alive. In its native Turkey it grows in scree or in bare soil on rocky slopes at altitudes up to more than 10,000 feet (3000 m). The sky-blue flowers just above the grey hairy cushion make a stunning display. I grow it outside in a sunny scree of tufa rocks. Propagation is possible from seeds, but cuttings have good results as well. If growing in pots, I recommend a well-drained mix from sand, pumice, a small amount of peat, and, if available, a small amount of seramis.

### *Vitaliana primuliflora*

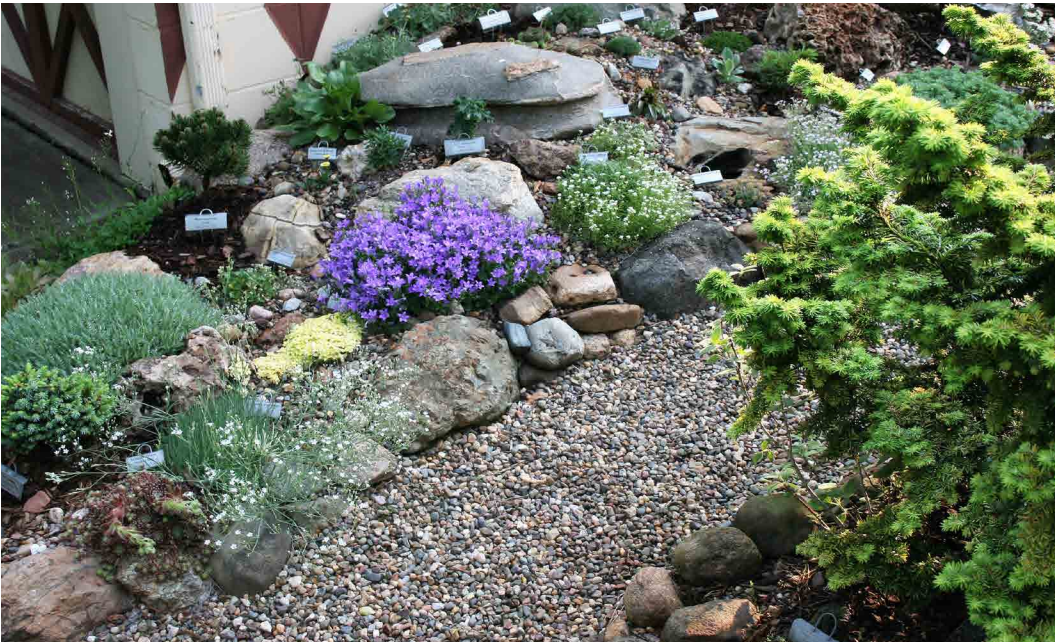
Sometimes also listed as *Androsace vitaliana*, this is a variable species from the Dolomites, Alps, Pyrenees, and Sierra Nevada. The flowers are usually bright yellow, sessile, and 0.7 inches (2 cm) across, blooming over a low cushion of foliage to 6 inches (15 cm) across or more. It is an easily grown species in a well-drained, gritty, limy soil in a sunny part of the rock garden. It is easily propagated by cuttings in late summer.

# Underappreciated Rock Garden Plants

GARY WITTENBAUGH

HERE IN IOWA, where we don't have many rock gardeners, I sometimes wonder if all rock garden plants are not underappreciated. I do have a few plants that are my favorites, even though they may be underappreciated in Iowa, or for that matter anywhere.

I happen to be lucky enough to live in an area some call "The Little Switzerland of Iowa." This is the very northeast corner of the state where it may be only 72° F (22° C) when it is 92° F (33° C) in Western Iowa. I do admit it is also colder in the winter, but we normally get a lot of snow, which is good. We also have a lot of rocks, both limestone and what I call fieldstone. So we have a few rock gardens (one of which we call 'Weenie Point' because one rock looks like a hot dog bun) at our garden. The garden as a whole we call FranMara, for our father Francis and mother Martha.



A rock garden named "Weenie Point" for a hot dog bun shaped rock

The soil mix we use works for us. First of all, we made our whole garden a raised bed so we would not have drainage issues. In the area where we were planting acid-loving plants we used a mix of peat moss, pea gravel, a little topsoil, and sand mixed with #2 or #3 chicken grit. The sand we can get in this area is too fine for my taste, so I add the chicken grit. When I plant either acid- or lime-loving plants, I put #2 chicken grit around the crown of the rock garden plants. The secret to this whole thing is you top-dress your beds with alfalfa meal. Willow sawdust would work better, but where are you going to find that much willow sawdust? You can get chicken grit and alfalfa meal at any feed store in Iowa. For lime-loving plants, we substitute lime chips for the pea gravel and use more top soil and less sand and eliminate the peat moss. To finish it off for that pristine rock garden look, in the lime beds we start with big limestones and go smaller and smaller all the way down to lime chips. In the acid beds we use fieldstones and go all the way down to pea gravel. We never mix the two different types of rocks because it just doesn't look right and the plants don't care for it either.



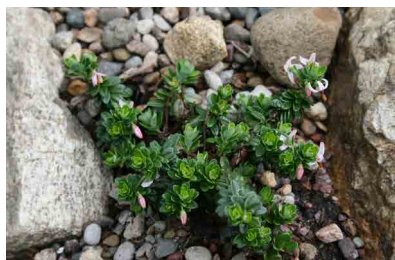
*Sempervivum arachnoideum* 'Stansfieldii'

One of my favorite underappreciated plants is the lowly sempervivum which some may call hen & chicks (a term I just hate and don't know why). They are great plants that grow anywhere in Iowa as long as you give them plenty of sun and a dry place to grow. They do not like wet soil one bit. But as long as the soil is well drained (and I mean not a bit wet), I have no trouble growing them in my yard. Don't forget that the rosettes flower and then die. It serves them right for having such an ugly flower stalk. But that flowering doesn't happen often and other than that they are a great plant. My favorite may be *Sempervivum arachnoideum*. They look like I should dust them to get rid of the cobweb look in the center, which I love. sempervivum look great in the ground or in a muffin tin, just don't forget to put holes for drainage in the muffin tin. As sempervivum like it dry, we don't water the muffin tin unless it has not rained for 2 or 3 weeks. As for the other plants in the garden, if a week goes by without rain we water most of the plants.



Sempervivum in a muffin tin.

Another group of plants I don't see much of and love are small shrubs. I don't mean *Arctostaphylos nana*, which is very hard to find, or *Phylliopsis* 'Askival,' which is darn near impossible to grow, at least for me. I mean small shrubs you can find anywhere such as *Vaccinium macrocarpon* 'Hamilton' or the daphnes that I dearly love. I have about 30 different species or cultivars of this shrub and 'Carol Mackie' is not in the batch. I used to have 'Carol Mackie,' but to be kind, let's just say I don't any more. My favorite daphne used to be *Daphne juliae*, but I think now it is *Daphne x hendersonii* 'Aymon Correvon'.



*Vaccinium macrocarpon* 'Hamilton'

If you want one of the small rock garden daphnes, I think the best would be a *Daphne velenovskyi*. A good choice would be *Daphne velenovskyi* 'Old Port'. Another good choice would be *Daphne arbuscula*. I like all the small shrubs. Some say that is because I am a tad lazy and don't like the deadheading or the shearing that goes with rock garden plants. Just remember you have to do a little pruning with the shrubs once in a great while.



*Daphne x hendersonii* 'Aymon Correvon'

Last but certainly not least, are the conifers, my favorite rock garden plants that I rarely see in rock gardens in Iowa (or elsewhere), unless I have managed to have a small influence on the gardener. One of the reasons for this is that gardeners are afraid to cut out a conifer when it gets too big because they made the wrong choice of variety. Everybody chooses the dwarf conifers, which, as defined by the

American Conifer Society, can grow from 1 to 6 inches (2.5 to 15 cm) a year, when they should be choosing the miniature conifers, which will grow less than an inch (2.5 cm) a year. If you do choose a dwarf, pick the ones that grow 1 or 2 inches (2.5 to 5 cm) a year. But sometimes, conifers grow faster in your garden, and if they do, don't be afraid to cut them out.

One choice you should make is *Abies lasiocarpa* 'Duflon', which is definitely a miniature. I have had one of these for about 20 years and it still has not outgrown its spot. This conifer will grow in shade but mine is in quite a bit of sun and does very well. There are many miniature conifers that will take sun including *Pinus mugo* 'Jim's Dwarf', *P. mugo* 'Bonsai Kramer', and *P. sylvestris* 'Bennett Compact'. If you choose a small dwarf, remember you may



*Abies lasiocarpa* 'Duflon'

have to do some cutting; sometimes even I do. I chose one small dwarf, *Abies koreana* 'Kohout's Ice Breaker,' a real beauty that will break my heart because I know I will have to cut it down someday. You can put this day off by some judicious pruning and shopping for small plants. Everybody wants a big plant to start with, but if you plant small in the beginning you will have the conifer longer.

There are a lot of rock garden plants that are underappreciated and underused. Wherever you garden, try some of these plants, especially conifers. You won't regret it.



*Abies koreana* 'Kohout's Ice Breaker'

# A Saucy Soapwort from Cyprus, *Saponaria cypria*

MARK McDONOUGH

AN ESSENTIAL BENEFIT of NARGS membership is access to an annual seed exchange with thousands of hardy plant species to select from, where rare treasures can be discovered. One such treasure from the 1999 NARGS seed exchange was *Saponaria cypria*, seed collected in the Troodos Mountains, Cyprus, at 5250 feet (1600 m). As a fan of *Saponaria* and *Silene* (Caryophyllaceae: pink or carnation family), I chose this soapwort without knowing what to expect. All I knew was that it was from a far-flung, island nation in the Mediterranean. This selection was surely a gamble; plants from such locales are likely not hardy enough to survive unforgiving New England winters. But I was anxious to give it a try nonetheless. A few seedlings resulted the following spring of 2000, and first flowering occurred July 2002.

Useful information on this plant was lacking, both in available print and in the thinly populated early Internet. Anxious to find out more about Cyprus soapwort, I managed to track down two small books that provided clues for cultivation: *Cyprus Flora*



*Saponaria cypria* in full bloom in the author's garden.



First flowering of *Saponaria cypria* grown from the NARGS seed exchange.

*in Colour: The Endemics* (1993) by V. Pantelas, T. Papachistophorou, and P. Christodoulou and *Nature of Cyprus: Environment, Flora, Fauna* (1992) by Christos Ch. Georgiades. The topic plant is endemic to the Troodos Mountain range, growing within the upper altitudinal range of 4430-6400 feet (1350-1950 m), habitat described as “screes and rocky mountainsides, under pines or by streams confined to igneous rocks.” Two photos of wintry mountain scenes showing deep snow cover and ski lifts on upper slopes gave hope that plants from mountainous regions of Cyprus might indeed be winter hardy in my garden.

Having grown this plant outdoors for 16 years in the northeastern USA (Massachusetts, USDA Zone 5b) is more than adequate proof that it’s a hardy herbaceous perennial suitable for colder climates. The plant possesses a number of unique and surprising characteristics, the most unusual being crepuscular blooming, flowers opening at dusk and closing by noon the following day, most likely a moth-pollination development. Also surprising among a genus of primarily spring-blooming species, *Saponaria cypria* flowers later during the summer season, starting mid-July and continuing for many weeks until the end of September. And last but not least are long calyx tubes conspicuously shaded red, looking like little firecrackers with visual appeal even after short-lived petals fade.



Unusual for a soapwort, the flowers are closed at midday.

I have two plants planted in a deep sand pocket facing south in full sun. Rocks on the north side help buffer prevailing winter winds and storm gales. The plant grows from a branched woody rootstock, forming a compact mat only 2 inches (5 cm) tall, neatly decked with succulent obovate bluish-green leaves handsome in their own right. Basal



Even out of bloom, the foliage is attractive.

leaves are smooth, yet all upper parts of the flower stems, cauline stem leaves, and exaggerated calyx tubes are densely sticky-glandular. In mid-summer, myriad sprays of bright pink flowers appear on 4-5-inch (10-12.5-cm) branched stems, radially arranged to reach the plant's periphery, creating a wheel of bloom.

Though I have grown this plant for many years, there is a risk of losing it if I cannot successfully propagate and increase its numbers. In all those years, seed has not been set (with one exception); most likely we do not have the right nighttime pollinator that exists in the wilds of Cyprus. The exception to this lack of seed set was late summer 2015. I collected a small quantity of seeds to share with another NARGS member and sowed the rest



The flower display is very long, continuing into September.



myself. But neither of us got any germination. The cuttings I tried this year also did not succeed, understandable because of our record-breaking, severe drought during the summer of 2016. Next year I shall try cuttings earlier in the season before arrival of hot weather.



Close up of the flowers of the Cyprus soapwort.

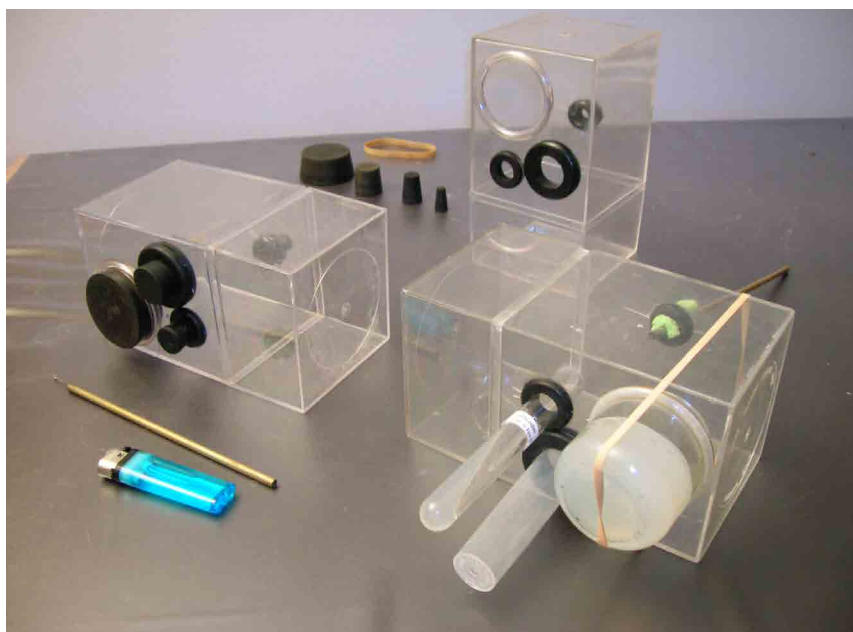
Late summer of 2013 was a watershed moment in my cultivation of the Cyprus soapwort. I was compelled to tempt fate and relocate my original plants to a new garden. My older garden had become shaded and was suffering from unavoidable neglect with disastrous unchecked invasion by rhizomatous field grasses. It was imperative to extract plants, bare root them to remove all grass rhizome fragments, then replant them in a new sand and grit bed. The plant's tap roots went very deep, deeper than I imagined. Alarmingly, I ended up severing the lowermost portions of root during the extraction process. I continued the operation and took extra care to provide a suitable new home, then watered frequently to re-establish the plants and compensate for the loss of root mass. Perhaps not surprising, shortly after transplanting it appeared as if the plants had died; all visible growth dried to a crisp leaving bare woody stubs. Believing that I had probably killed the plants, I continued irrigation and kept quasi-optimistic that the plants would rejuvenate in spring. Sure enough, the following spring it was great relief to find fresh shoots arising from the woody caudex. The plants skipped flowering that year of resurrection (2014), but vegetative growth looked healthy and strong, and they continued to increase in size, and flowered well the following two years.

There are other desirable mountain plants from Cyprus, including endemic species of familiar genera such as *Teucrium*, *Scutellaria*, and *Onosma*. Most are rare or absent in cultivation and some are strictly protected, thus unlikely to become available. Yet one never knows. I peruse seed exchange listings, particularly for wild collected seed, to find other plant treasures to add to my garden. Such is the pleasure of rock gardening and wildflower gardening in general. I seek a happy ending to the *Saponaria cypria* cultivation story, to get this plant propagated and distributed to commercial growers and nurseries, so it can become firmly established in cultivation.

# Adventures in Native Species Acquisition and Propagation

ROBERT E. SWARTZ

I HAD BEEN an analytical chemist for 45 years, and as I approached my retirement, I realized that I would need suitable projects to stimulate my interest. I began trying to propagate as many unusual native species as possible. I wanted to propagate, not just merely grow, these plants. To me, the need to possess wonderful flowering plants in one's garden does not just mean going to specialty garden centers or friends and acquiring a few plants to drop in the garden. That only makes one a temporary custodian until some rodent, insect, or pathogen finally kills that special cultivar or rare species you searched for years to acquire. Everything is finite; everything dies. To really have a plant, one must propagate it in a reasonable quantity.



Miniature glove boxes used to maintain the sterile conditions required for effective orchid seed germination.



The process of *Cypripedium* propagation from deflasking young seedlings (top) to plants ready to be planted out (bottom).

## Orchids

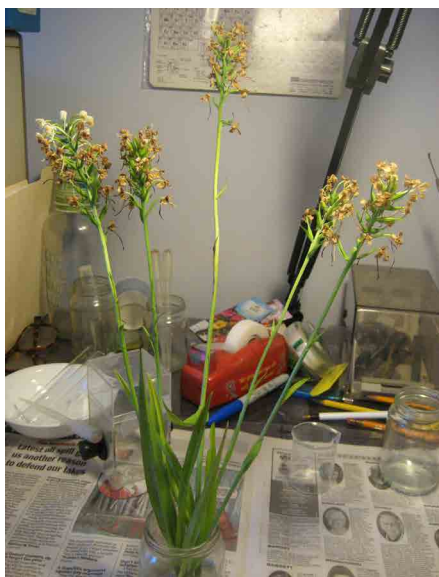
Number one on my list of propagation projects was to germinate native orchids and reintroduce them to appropriate local parks in the vicinity. It took several years, but I became reasonably good at producing quantities of *Cypripedium*. To achieve sterile media for germination and transfers, I used my wife's pressure cooker to make my tubes and bottles of media, and I created miniature glove boxes that served me well. I transferred plants to fresh media inside a bleach-sterilized, clear plastic container, with ports lined with rubber grommets or split tubing for standardized tubes or jars. Despite very brief exposure to air outside the sterilized container, contamination losses



An artificial bog (left) makes a perfect habitat for *Platanthera ciliaris* (right)

were minimal, and I was able to generate relatively large quantities of seedlings. During this process, I learned many lessons, such as the physical environments and predators that will destroy young orchids. I found that these seedlings are successful in only certain areas of my property, all moist and partially shaded. Perhaps only 2% of the initial seedlings survived for more than 3 years to become permanent. It took several years, but eventually I filled the niches in my wildflower garden with *Cypripedium makasin*, *C. pubescens*, *C. candidum* and *C. reginae*. The end result is very rewarding.

Some of the fringed orchids, genus *Platanthera*, can also be propagated easily. I grow *P. blephariglottis* and *P. ciliaris* in an artificial bog I made using a 2-foot by 3-foot (0.6 by 1 m) container bought in a hardware department. To this I added perforated plumbing at the bottom to create a system in which, as pH acidic adjusted water is added to the surface, excess overflow is removed only from the bottom, ensuring the removal of toxic organic breakdown products. This system has worked well for 7 years and could be used to grow many plants that require lots of moisture.



Cut orchid stems will ripen seeds in a vase.

One of the problems of collecting orchid seeds like *P. ciliaris* in the wild is that, though they are easily visible in spring, when the seed pods are ready later in the season they are overgrown by other plants and impossible to find. When one of my first seed-grown *P. ciliaris* was broken off in a storm, I discovered that the flowering stem can be placed in a vase of water, hand pollinated, and kept in a window until the seeds are ready for extraction at 5 weeks. Unbelievably, I even managed to keep blooming stems of donated *P. blephariglottis* on a north-facing windowsill for 10 weeks until the seed pods were completely ripe. In the end, the stem and leaves looked spent, but the seed did mature and germinate. This means that if you find an orchid in bloom, the flowering stem can be removed just above the main basal leaf and be kept until the seeds are ready for processing.

I achieved my goal to propagate and plant out native orchids, and over a period of 5 years, I planted over 1,000 *Cypripedium* seedlings in optimum spots in a local county park. Disappointingly, they all perished within 2 years of planting. I've learned that if you want to grow native orchid from seed, you can do it, but you need to be a little nuts in the head.

## Trillium

I live in Michigan, and I had the privilege of knowing Fred Case for 40-plus years. He was the state's leading expert on native plants, and many a time I would visit his botanical wonderland of native orchids, trillium, carnivorous plants, and wildflowers. In an attempt to mimic his vast collection, I tried germinating the rarer trillium species from seed. The trouble with getting seed from Fred was that all his garden plants were subject to open pollination. This unfortunately included



Immature fruits of *Trillium undulatum* ripen floating in a glass on a sunny windowsill.

the *Trillium simile* pod he gave me for my first attempt. When the plants finally flowered after waiting for 6 years, they were all unremarkable hybrids. I tried again, but this time limited my seed acquisition from his garden to *T. nivale* and *T. pusillum*, because these two bloom sequentially when no other trillium is open, guaranteeing pure species.

To secure pure seeds of other species, I learned to collect seeds from wild plants. The best method I've found to collect wild trillium seed is to pick a nearly ripe pod with the pedicel attached, then float it in water using thin Styrofoam on a sunny windowsill to ripen.

### *Arisaema*

When it comes to the native wild flowers, I originally paid little attention to our Jack-in-the-Pulpits (*Arisaema triphyllum*). Here in Michigan they are lowly things, not that attractive and just mildly interesting. My opinion changed, however, about 2 decades ago at the Case estate. On that visit, the conversation drifted to *Arisaema* and Boots, Fred's wife, showed me some specimens they had acquired. I was stunned by a display of Jacks that looked like they were constructed of stained glass. What I was viewing was *Arisaema triphyllum* subsp. *triphyllum* var. *zebrina* a plant about which there is very little in print even today. It took me several years to get a plant that was mature enough to bloom female. Serendipitously, at Fred's delayed memorial in May 2011, Brian Winchell had brought in a vase of wildflowers that contained a male, zebrina Jack he had acquired from Fred. With it, I pollinated my one flowering plant and produced seeds that now are adult plants.

The main problem of growing *Arisaema* in the US is *Uromyces*



*Arisaema triphyllum* subsp. *triphyllum* var. *zebrina*

*ari-triphylli*, a rust fungus I have seen on wild plants just a few miles north of my garden. I blame that rust for the demise of my original plants, which I planted in the shaded moist section of my wildflower garden. I credit my success in avoiding this problem since then to planting my *Arisaema* in open areas with greater air circulation. So far there has been no sign of disease under these conditions.



A special clumping, heavily flowering form of *Erythronium albidum*

### *Erythronium*

*Erythronium americanum* is a very poor bloomer. *E. albidum* is a bit better but still blooms sparsely. In 1969, I came across a clump of perhaps a dozen flowering *E. albidum* in a wooded area slated to become a condo development. I felt no remorse when I came back and managed to dig 2-3 of the deep bulbs for my garden. They flowered regularly for me every year but did not really multiply until years later when I relocated a few to full sun, after which they began to flourish and clump again. This clumping property is unusual, and I wanted to propagate it, but my initial attempts to collect seed failed thanks to some ants.

Myrmecochory (seed dispersal by ants) exists in about 9% of all

species of flowering plants, including many of my local natives. These plants have seeds with nutritious sugary coatings or attachments called elaiosomes that entice ants to carry them away. These elaiosomes are so attractive to ants that if you are just a day or two late to collect seed, you will find nothing. Some or all of the species in the genera *Claytonia*, *Sanguinaria*, *Trillium*, *Viola*, *Iris*, *Erythronium*, *Jeffersonia*, *Cyclamen*, *Dicentra*, *Galanthus*, *Stylophorum*, *Hyacinthus*, *Narcissus*, and *Crocus* fall into this category.

To collect seeds of these plants I secure a small 1.5-inch by 2-inch (4-cm by 5-cm) Ziploc plastic envelope over the seed pod. I have even secured the envelope with string to a small stake to prevent the wind from carrying everything away. Disappointingly, my unusual *Erythronium albidum* clone seems reluctant to set seed. Fortunately, in full sun, the bulbs multiply quickly, and I now have many clumps of this special plant.

### *Rhododendron*



*Rhododendron* seedlings growing under lights.

In July of 2008, as a member of the Native Orchid Conference, I was walking an open area in the Appalachians of southern Pennsylvania. While looking for yellow fringed orchids (*Platanthera ciliaris*), a great fragrance caught my attention. Some 25 feet (8 m) away at the clearing edge were 4, 12-foot (3.6 m) *Rhododendron arborescens* in full bloom in July. Never having seen a native azalea, I was overwhelmed by the flowers, the scent, the polished leaves, and their intimidating immensity. I was hooked. The next spring was the first opportunity I had to go back to see if I could glean seeds from the old pods. Serendipitously I found six *R. prinophyllum* in bloom growing 120





Seed-grown *Rhododendron arborescens* (left) and *R. prinophyllum* (right) blooming in the author's garden.

feet (36 m) up an incline from the *R. arborescens* stand. I gathered old pods of both species and managed to get sufficient seed to grow about a hundred seedlings of each under lights in the basement. I grew so many because I realized that most of them would perish since I do not have the acid soil of Pennsylvania. Several years later after many losses, I eventually had several 30-inch (76 cm) plants that grew and flowered well. I still have 6 healthy *R. arborescens*, but sadly, after flourishing for several years, attrition prevailed and the last of the *R. prinophyllum* died. Researching on the web I learned that that at 2 locations in Scioto County, Ohio, there are *R. prinophyllum* growing on neutral (pH 6.86 to 7.13) rather than acidic soils with no signs of chlorosis. I need to acquire seed from that stand. Plants are like people; they are all a bit different in their requirements and disease resistance, and sometimes the secret to success may be a different source for the same species.

## Cactus

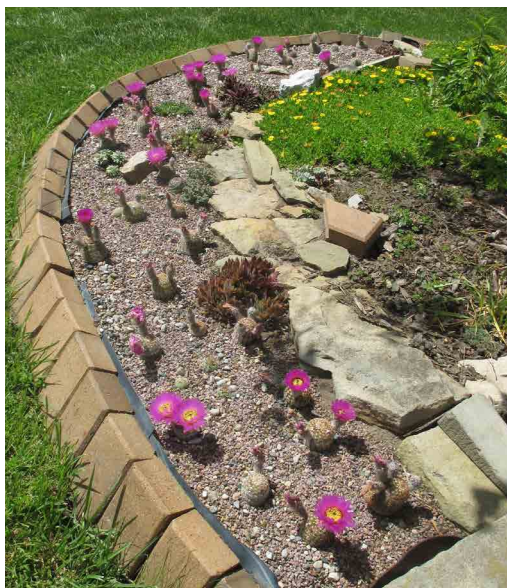
I think one of the pleasure points of rock gardening is growing things that don't belong. Here in the eastern U.S., cacti fall into that category. I have the Michigan native, *Opuntia cespitosa* and the western *Opuntia polyacantha*, which are no big deal; anyone can grow them. More unusual, I grew *Cylindropuntia imbricata* from seed until it reached 4 feet (1.2 meters) high with some very, very mean spines. It was impressive, but the wife said that if the grandkids got into it, she would make me "eat the damn plant." The plant had also seriously assaulted me several times, so when it showed weakness after a particularly bad winter, I attacked with tongs and hatchet. My souvenir of it is a nice collection of cholla wood.



The author with his *Cylindropuntia imbricata*, *C. whipplei*, and *Opuntia cespitosa*.

The real prizes of my rock garden are the ball cacti. I tried growing these several times without any particular success until I planted them in a new location. The new cactus garden started as a barrier to keep lawn grass from invading my flower beds. I made a trough of old pond lining that drained slightly down hill and filled it with pea gravel topped with decorative stone.

The barrier-turned-cactus-bed has no organic matter or sand, just the stone. I fertilize monthly and my cacti flourish with no weeds or other problems. I germinated seeds of various species saved from my own garden, from the NARGS seed exchange, and from Alplains. I planted out a large quantity of 2-year seedling cacti. This year, I had 200-plus ball cactus flowers over a 2-month period, mostly *Echinocereus reichenbachii* and *Escobaria*, but seedlings of other cactus species have



*Echinocereus* and *Escobaria* cacti growing and blooming in a bed of pure gravel.



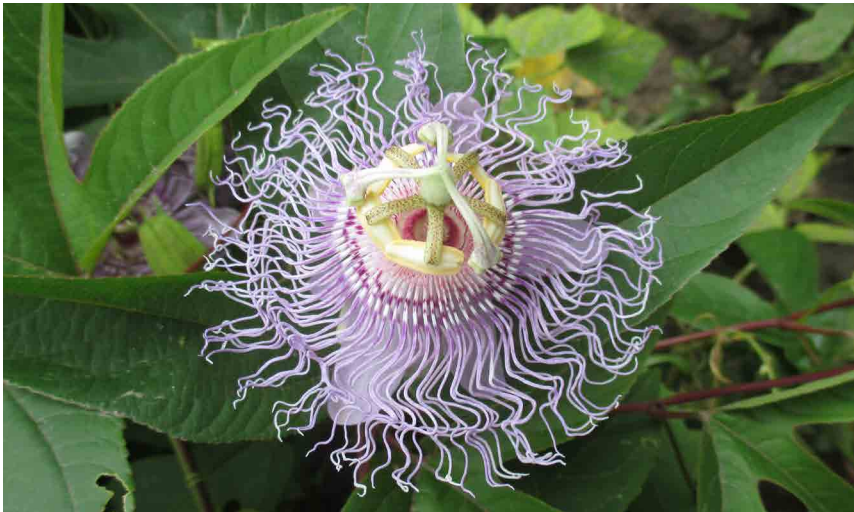
*PheMERANTHUS breVICAULIS*

started to flower as well. To protect them from winter wet, I cover the trough with transparent plastic in October. In that same trough I also put *Delosperma basuticum* and *D. congestum*. My prize *PheMERANTHUS breVICAULIS* overwintered there and bloomed this year, but it is not thriving. The trough may be a bit too lean for it and the plant may need relocation. Just to be on the safe side, I keep a few in a pot for overwintering in the garage.

Sometimes called the hardy living stone, seed grown *Aloinopsis spathulata* will be tested there in the coming winter. I've learned that with the proper species selection and the right site, you can grow just about anything.

### *Passiflora*

It probably does not qualify as a rock-garden plant but I have always been fascinated by passion flowers. Years ago, I found that while *Passiflora caerulea*, *P. incarnata*, and several hybrids would give a decent flower display outside here in Michigan, only *P. incarnata* would survive the winter. I have acquired three cultivars of *P. incarnata*, each collected here in Michigan, from people who have brought them up from the



*Passiflora incarnata* 'Sterling Heights' is beautiful and hardy but so vigorous as to be a weed.

southern U.S. I name them after the city where they were grown. The first, 'Roseville', I acquired in 1993 from where it had been grown as an heirloom in southeastern Michigan since the 1930s. It grows nicely next to the house but only survives the winter close to the protection of a warm basement wall. 'Troy' has a bit larger flower and is hardier, but it is unreliable in an open garden. By making it a tetraploid with colchicine, it became hardier and the flower became larger and sterile—all good points. The search concluded with the acquisition of 'Sterling Heights', which is totally hardy in zone 5. When I first acquired "Sterling Heights", I was unaware of its properties. I planted it out in my garden for observation, and, finding its flower not that interesting, I ignored it. It continues to flourish despite being rototilled 4 times and after 2 attempts to remove it. I am amazed at its tenacity. It is now spreading throughout the garden, and shoots are coming up 14 feet (4 m) into the lawn. I am no longer in awe, I am defensive. The only safe place for this plant is a nice basement wall in Alaska. I plan to convert it to a sterile tetraploid to eliminate the seed threat and then plant it in a deep buried pot to prevent spreading. Starting next year, any emerging shoots in the garden will be removed until it is permanently gone. Great flower or not, when it grows too well, it's a weed. But in the right place, *P. incarnata* can be a good garden plant. After crawling under the concrete driveway, it emerged out of a small opening alongside the house where it returns and flowers every year with no weeding, watering, or care. It only requires a trellis support.



*Passiflora incarnata* found its own way to this crack in the driveway where it thrives with no care whatsoever.

### *Delosperma*

*Delosperma* or ice plant is not a U.S. native, but I have included it anyway because it is an interesting story. From South Africa's Drakensberg Mountains, *Delosperma cooperi* is my favorite ice plant, flowering from July to September. I acquired some around 1980 and planted them in a well-drained spot. They bloomed that summer but disapprovingly perished in our zone 5 winter. The next spring, I noticed



Natural selection over 35 years has resulted in a reliably hardy form of *Delosperma cooperi*.

small seedlings come up, and they grew, flourished, and bloomed again. They would repeat this germinate-grow-die sequence for the next 5-6 years. After 10 years, they began surviving mild winters but perishing during the harsher ones. After the second decade there were always a few plants that survived even the harshest winters. After 30 years, all the mature plants survive all winters. They are the product of a single planting and 35 years of natural selection from the perhaps 250,000 seeds produced each year. I cannot take credit for this adaptation; I only observed and protected. In addition to increased hardiness, new color forms have also arisen, but the evolutionary process has slowed in recent years. New seedlings are unable to compete with the permanent, mature plants that now dominate the allotted area. They are easy and fast to root, so one spring, I made cuttings and planted them around the waterlily pond. I did not expect them to overwinter in that low moist ground and was surprised when a single one did. I watched it survive again the next year in that unsuitable area, then rooted 2 dozen copies for other places in the yard. I am now in the process of sharing this clone to members of NARGS's Great Lakes Chapter. This organization has been good to me, and I want to give back. And sometimes the best way to keep a special plant is to give it away so that if anything should ever happen to mine, I can reacquire it from a friend.

I like species flowers; they possess a unique form and color. Sometimes the propagation of these wild species is difficult, and they sometimes struggle in the garden, preferring their wild niche. However, each plant is slightly different and seed is the best way to explore the latent potential of a wild plant. One might have to grow a hundred plants to find the one that is marginally adaptable. Continue to propagate the survivors and in three or four generations, you will have a plant that thrives in the garden. All plants were wild at some point. How many wild plants succumbed before someone found the adaptable petunia? The main thing is to enjoy the process.

# 2017 NARGS Annual General Meeting

Rock Gardening in the Southeastern U.S. – Past, Present, and Future  
November 17-19, 2017

The 2017 Annual General Meeting (AGM) of NARGS will be in Durham, North Carolina, and is being hosted by the Piedmont Chapter. The AGM will explore the past, present, and future of rock gardening in the southeastern and mid-Atlantic regions of the U.S.

The AGM will include a welcome reception and presentation on Friday evening, November 17; a full day of presentations on Saturday, November 18; and tours to three gardens in the Triangle area on Sunday, November 19. The conference fee is \$325 per member. Additional activities include an optional pre-conference, two-day guided tour of botanically interesting natural areas in North Carolina's Coastal Plain on November 15 and 16, and visits to public and private gardens in the Triangle area on November 17 (the pre-AGM activities on November 15-17 are dependent on the number of persons who sign up).

Additional information on the meeting as well as an on-line registration form are available on the meeting website ([www.piedmontnargs.org](http://www.piedmontnargs.org)). Registration will be limited to 120 participants. We hope you will join us!

## AGM Details

Speakers on Friday evening and Saturday are listed below. Additional information on the presentations is on the website.

**Tim Alderton** – Horticulturist at the JC Raulston Arboretum

**Tony Avent** – Internationally known plant explorer, hybridizer, and speaker; owner of Plant Delights Nursery and Juniper Level Botanic Garden

**John Grimshaw** – Internationally known plantsman, author of *Snowdrops: A Monograph of Cultivated Galanthus*, and director of the Yorkshire Arboretum, Castle Howard, England

**Larry Mellichamp** -- Author of *Native Plants of the Southeast*, former Director of the UNC-Charlotte Botanical Garden, and President of the North Carolina Native Plant Society

**Jeremy Schmidt** – Grounds and research staff, Juniper Level Botanic Garden

**Andrea Sprott** – Curator of the Elizabeth Lawrence Garden in Charlotte, North Carolina

**Joseph Tychonievich** – Author of *Rock Gardening: Reimagining a Classic Style*; editor of *NARGS Rock Garden Quarterly*

**Bobby Ward** – Author of multiple books, including *Chlorophyll in His Veins: J. C. Raulston, Horticultural Ambassador*.

## Registration Form - NARGS 2017 Annual Meeting

If you have access to the internet, please register by completing the on-line registration form on the website ([www.piedmontnargs.org](http://www.piedmontnargs.org)). If you do not have access to the internet, please complete the following form and send it along with your check in U.S. Dollars made out to Piedmont NARGS to the Conference Registrar at Bobby Wilder, 2317 Elmsford Way, Raleigh, NC, 27608-2065. There is a \$25 cancellation fee until October 15, 2017. There are no refunds after that date. If you have questions, send an e-mail to [administrator@piedmontnargs.org](mailto:administrator@piedmontnargs.org).

<b>Personal Information:</b>	First and Last Name	For name tag
Member 1:		
Member 2:		
Dinner Guest:		

Street or Mailing Address:		City:	State/Province:
Zip Code:	Country:	Phone:	E-mail:

May we list you and your contact information in the list of attendees?

No listing		No telephone		No e-mail address	
------------	--	--------------	--	-------------------	--

Meal Choices:	Member 1	Member 2	Guest
Saturday Lunch			
Salad with Grilled Chicken			
Vegetarian Lasagna			
Saturday Evening Dinner			
Marinated Turkey Tenderloin			
Roasted Pork Loin			
Napoleon of Grilled Vegetables			
Sunday Lunch			
Turkey			
Vegetarian			

If you have special dietary requirements, please explain here:

Fees:	1	2	\$
Registration (current NARGS member)	\$325/person		
Registration (including 1-yr NARGS membership)	\$365/person		
Pre-Conference Trip on Nov 15-16 - \$300/person double occupancy room			
Pre-Conference Trip on Nov 15-16 - \$345/person single occupancy room			
Shuttle to Plant Delights on morning of Nov 17 - \$25/person			
Shuttle to Duke and NCBG on afternoon of Nov 17 - \$25/person			
Both shuttles on Nov 17 - \$40/person			
Guest: Friday reception and presentation - \$40/person			
Guest: Saturday banquet and evening program - \$55/person			
Total Payment			



**Registration Now Open:**

云南

PLANTSMAN'S TOUR OF  
YUNNAN, CHINA

16-day tour, June 13 – June 29, 2018

From our tour leader Panayoti Kelaidis:

"The Snow Mountains of Yunnan are the southernmost extension of alpine flora in China. This region possesses some of the greatest biodiversity on the planet; here we'll follow the footsteps of Forrest, Kingdon-Ward, Rock (and Harry Jans) through several mountain ranges northward towards Tibet. Expect to see a vast range of *Primula*, *Androsace*, *Rhododendron* and no end of *Roscoea*, *Anemone*, alpine gesneriads, aroids and woodland treasures galore--a living encyclopedia of alpines!"

Get Ready! We expect this to sell out fast!





Minimum number of participants: 15; Maximum: 22.

Shared twin price: \$4,500 USD;  
single room supplement: \$5,500 USD.

NARGS membership required:  
[www.nargs.org](http://www.nargs.org)

Airfare (roughly \$1500 USD) from and to the U.S. is not included. Also airfare to Lijang and from Shangrila is not included in the price. Participants will need to book their own flights. For questions please contact Jody Payne ([jodycpayne1@gmail.com](mailto:jodycpayne1@gmail.com)) or Lola Horwitz ([llhorwitz@gmail.com](mailto:llhorwitz@gmail.com))

**Booking:**

Those wishing to book should email NARGS Tours Committee co-chairs Jody Payne ([jodycpayne@gmail.com](mailto:jodycpayne@gmail.com)) or Lola Horwitz ([llhorwitz@gmail.com](mailto:llhorwitz@gmail.com)). Panayoti Kelaidis is also happy to answer any questions about the tour. You can email him at [telesonix@outlook.com](mailto:telesonix@outlook.com) or call 303-356-1698.





## Itinerary:

### **June 13**

Lijiang

Arrive and transfer to hotel.

### **June 14**

Lijiang

Visit Yufeng Monastery, Naxi village Yu plus Joseph Rock Residence, Black Dragon Pool Park and free time in the old town of Lijiang for you to explore the town by yourself. After dinner, enjoy the evening show of ethnic dancing and singing.

### **June 15**

Lijiang

Drive to Ganghoba and botanize at top of the pass and into the Ganghoba valley.

### **June 16**

Shangrila

Transfer to Shangrila; en route, stopover for overview of the First Bend of Yangtze River, and visiting the deepest gorge in the world, Tiger Leaping Gorge. Make some stops for botanizing flowers on the way.

### **June 17**

Shangrila

Visit Songzam Monastery, which is also named "Small Potala" and the local market. Free at leisure for the rest of the day.

### **June 18**

Shangrila

Botanize on Shangrila plateau and around Napa Hai

### **June 19**

Shangrila

Take jeeps to go to Tianchi Lake (3850M), and botanize around the lake.

**June 20**

Shangrila

Take cable car up to the top Shika Shan (4400m) and walk down (about 7 km) to the middle station (3745M) botanize on the way.

**June 21**

Hong Shan

Take jeeps to go to Hong Shan. Make stops on the way for flowers, and botanize at the top pass (4500M).

**June 22**

Hong Shan

Drive back towards the top pass, botanize on the way.

**June 23**

Hong Shan

Drive back to the pass again, botanize at different places on the pass.

**June 24**

Shangrila

Transfer back to Shangrila. Botanize en route.

**June 25**

Dechen

Drive to Dechen, see bend of Yangtze near Benzilan and Botanize en route.

**June 26**

Dechen

Drive from Dechen to top Bai Ma Shan pass and botanize whole day (east side).

**June 27**

Dechen

Drive from Dechen to top pass Bai Ma Shan and botanize whole day (west side).

**June 28**

Shangrila

Drive from Dechen to Shangrila, botanize en route.







Where Alpines Meet the Sea  
NARGS 2018  
Newfoundland Chapter, St. John's, July 6-8, 2018

Welcome to Newfoundland, the far east of North America! Eastern Newfoundland is a land of botanical extremes. There are boreal forests of balsam fir, black and white spruce along with the associated northern woodland plants. We have a multitude of bogs and fens, home to a wide variety of orchids and insectivorous plants. And then there are rocky coastal barrens which house wind-swept contorted trees and plants of an alpine nature more in common with high elevations of the New England Appalachians. We have the largest population of North Atlantic summering humpback whales, some of the largest seabird colonies of eastern North America and are along the passing route of icebergs calving off glaciers in Greenland. This NARGS venue provides participants with a chance to visit one of the most hauntingly beautiful regions of North America. Newfoundland is truly where alpines meet the sea.



The summer 2018 NARGS meeting will take advantage of the Memorial University of Newfoundland Conference Facility. Accommodations will be available in Macpherson College, opened in 2013, whose private rooms offer modern and comfortable accommodations. Dining areas and lecture theatres are within a couple of minutes' walk from the College. The University is located in the heart of St. John's such that within a few minutes buses and taxis can bring you to the picturesque downtown with colourful row housing affectionately called "jelly-bean row", a plethora of tourist shops and some of the best seafood dining experiences in eastern North America. One of the main highlights from this meeting will be a visit to the Memorial University of Newfoundland Botanical Garden, an informal garden with 13 themed gardens including rock gardens, crevice garden, alpine trough display and alpine house.



Our guest speakers hail from the coasts of eastern and western Canada as well as Scotland. The plants discussed will be alpinines that can tolerate months of snow and overall wetter climates, with examples from the wild and how they perform in the garden. Day trips will introduce participants to the plants of the eastern Newfoundland coastal barrens and peatlands. Book sales and author signing for the field guides "The Trees and Shrubs of Newfoundland and Labrador" and "Wildflowers and Ferns of Newfoundland" will be available. Before the conference there will be open gardens. Further details on the conference and registration forms will be provided in the Winter 2018 issue of *The Rock Garden Quarterly*.

We invite you to experience the warmth and hospitality of the oldest city in North America!

## Hikes – 3 levels

Saturday July 7 and Sunday July 8

**Level 1 – Easy** – these walks will take place on relatively level ground utilizing gravel pathways. The two venues for these walks will be the Memorial University of Newfoundland Botanical Garden ([www.mun.ca/botgarden](http://www.mun.ca/botgarden)) and Cape Spear National Historic Site ([www.pc.gc.ca/en/lhn-nhs/nl/spear](http://www.pc.gc.ca/en/lhn-nhs/nl/spear)), the most easterly point in North America.

**Level 2 – Moderate** – Signal Hill coastal trail ([www.pc.gc.ca/en/lhn-nhs/nl/signalhill](http://www.pc.gc.ca/en/lhn-nhs/nl/signalhill)) with some 200 plus steps (we will do them downhill!) and the Beamer Trail in nearby Flatrock, a point of land that extends into the ocean with nearby seabird colonies and a chance for whales and icebergs.

**Level 3 – Difficult** – really this venue is just slightly more challenging than the previous. These walks will be over uneven ground with some uphill sections. One of these venues will be Hawke Hills, a site renowned for *Diapensia*, *Loiseleuria* and a plethora of clubmosses. The other will be a local bog and fen where we will look for orchids and various insectivorous plants.

## Speakers

John Mitchell (Scotland) – ‘Two Seasons in Tibet’

Jamie Ellison (Nova Scotia) – ‘Small Stature for Compact Spaces - A Passionate Plant Person's Perspective on Dwarf Woody Plants for East Coast Rock Gardens’

Jay Ackerly (British Columbia) – ‘Rock Garden Plants of Canada's West Coast’

Todd Boland (Newfoundland) – ‘Where Alpines Meet the Sea – The Arctic-alpines of Newfoundland's Limestone Barrens’

Gene Herzberg (Newfoundland) – ‘Flowering Plants of the Avalon Coastal Barrens, Bogs and Fens’





## Bulletin Board

summer  
2017

volume 75 | 3

### President's Letter

Fall is a fortuitous time of year: great for starting school, planting, and new moves. For us it's a good time to welcome Joyce Hemingson, Marianne Kuchel, Steve Whitesell, and Don LaFond to our working BOD. We promise you an ambitious year ahead. Look forward to hearing from me.

By now, you should have received the summer issue of our first Quarterly edited by Joseph Tychonievich. It is informative and he invites you to respond to him ([gsparrowgardens@gmail.com](mailto:gsparrowgardens@gmail.com)) with ideas, suggestions, and articles. This summer issue had a number of inspirational articles, but also opportunities to broaden your lifetime learning of the plant world.

Speaking of which: My spouse and I were lucky to be able to partake in one of the latest NARGS-offered tours, that of the Dolomites. For five days, plus a stop over in Venice, we had adventures in the Italian Alps. Not only did we see over a hundred plants with a knowledgeable guide, but also we were able to bond with 14 of our members. It's hard to truly communicate the comfort of being with fellow NARGS members. It is a special experience and the transfer of both knowledge and comradery is palpable. I look forward to seeing and hearing from them again. Of course, it also gave me ample opportunity to show the NARGS flag and get input.

An additional tour benefit is that NARGS does get a percentage of income from these tours. So it is a win-win for all. For example, because of two tours to Wyoming, organized by the Rocky Mountain Chapter, and our two Nature Treks, we were able to balance our budget for July. That's an accomplishment for which we have you to thank.

Although the amount varies on tours, the donations our chapters and members have sent us this year has made all the difference.

The tours are and will be an essential element of our membership offering. And donations (we can't thank you enough) help us finance the seed exchange, meetings, the *Quarterly*, stipends and administrative overhead.



Peruse the Website. The photos are better, the information is up to date and it's newsy. Who knew Jānis Rukšāns has another new book?

A special thank you in advance to one of our most supporting chapters ever—the Piedmont in North Carolina. The chapter which includes Bobby Ward, David White, Amelia and Richard Lane, plus many volunteers are dedicated to making this year one of our most anticipated annual general meetings (AGM) in November.

Always,

Betty Anne Spar

Email: [bettyannespar@gmail.com](mailto:bettyannespar@gmail.com)

### Book-of-the-Month Reviewers Needed

Reviewers are needed for the NARGS website's Book of the Month. Review books will be sent free to potential reviewers in exchange for a 200 to 300-word review that will be uploaded to the website with full credit. Book titles can be suggested by the reviewer or by the manager.

Please email Steve Whitesell ([elysium214@aol.com](mailto:elysium214@aol.com)) to express your interest or ask any questions.

**YOU CAN HELP KEEP NARGS SOLVENT!**

**Circle of 100 Challenge**

**Be among the 100 NARGS members willing to give \$300**

**DONATE AT [NARGS.ORG](http://NARGS.ORG)**

### Obituary: Thomas (“Tom”) W. Stuart

Tom Stuart, age 76, died on August 3, 2017, of complications from a bulbar form of ALS, which affected his speech and head and neck muscles. By email from his iPad to family and friends over the past year, he unabashedly chronicled the progression of the disease. In a message from April 9, 2017, Tom wrote, “Doubt there will be another update . . . Martinis. Now taking them again with a dash of cannabis.”

Few people have impacted the society in so many ways. Tom was a familiar face of the North American Rock Garden Society, but most often was behind the scenes pulling strings by advocating and persuasively lobbying for issues.

Tom served in various administrative capacities in the society, including: member of the board; director-at-large; grants, Internet, and membership committees; chair of the Hudson Valley Chapter; and organizer of annual meetings, and the Ephemeral Seed Exchange, a quasi-NARGS entity.

Significantly, he headed the NARGS Seed Exchange and kept it functioning at a crucial time when federal regulations began imposing restrictions on foreign seed imports, eventually allowing permits for small lots of garden seeds. His interest in garden seeds led him to get the “Barnard E. Harkness Seedlist Handbook” on line, making the publication more widely available.

He was an early proponent of the Internet and pushed NARGS into the cyberworld before many of its leaders understood its meaning and import. Tom successfully pressed for the publication of “Rock Garden Plants of North America,” culled from the best writings of the first 50 years of NARGS’s quarterly journals.

Tom’s garden in Croton Falls, New York, contains many fine plants, particularly woodlands and fern species. His passion for ferns resulted in lectures to NARGS chapters and garden clubs. Tom’s garden will live on through numerous plants he passed along to gardening friends, many in the Manhattan Chapter for its annual plant sales. The living memorial contains shortia, gentian, corydalis, ferns, and uncommon native plants.

In addition to chapter service awards, Tom received the society's Award of Merit in 1998, eloquently written by his friend, Larry Thomas, of the Manhattan Chapter, whose endorsement declared, "Tom galvanized many of us into action on projects that have changed the face of our organization."

Tom's survivors include his long-term partner, Ernie Gilbert.

--by Bobby J. Ward

### **Was Your Summer Copy of RGQ Late?**

Some of you (about 50 members) received your copy of the summer issue of *The Rock Garden Quarterly* about six weeks late. The printing and mailing problem occurred with the printer of the *Quarterly* in Kansas. We apologize for the delay and have been assured by the printer that the problem has been corrected.

### **We have learned of the death of the following NARGS members:**

C. P. J. Breed, Noordwijkerhout, Netherlands

Tom Stuart, Croton Falls, New York

Pamela Johnson, Blue Hill, Maine

## New Members

*Welcome to all those who joined between  
May 1 and August 7, 2017*

Abrahamsen, Erik, Grindbraatan 58 D, Hakadal 1484, Norway  
Alven, Annica, Hallkved Gotarna 391, Uppsala 75597, Sweden  
Bone, Lisa, 99 Middlefield Rd, Peru, MA 01235-9816  
Brazill, Linda, 5805 Hammersley Rd, Madison, WI 53711-3451  
Bruckner, Cherith, 1889 Paddock Pl, Fitchburg, WI 53575-2025  
Calkins, Tim, 12606 Thunder Chase Dr, Reston, VA 20191-5819  
Conlon, Regina, 3934 N Longview Dr, Jupiter, FL 33477-5856  
Csipkay, Francesca de, 2026 Hoyt Ave, Everett, WA 98201-2240  
Drummond, Kevin, 124 Worth St, Mount Airy, NC 27030-4756  
Erickson, Susan, POB 65451, Port Ludlow, WA 98365-0451  
Ernest, Linda, 22 Sonneck Sq, Scarborough, ON M1E 1A9, Canada  
Fritz, Jeff, W279N5851 Walnut Grove Dr, Sussex, WI 53089-3350  
Gomez, Annette, 208 Johnson St, Stoughton, WI 53589-1524  
Hansen, Chris, Garden Solutions, POB 52, Zeeland, MI 49464-0052  
Hill, Betsy, 6214 Rose Valley Dr, Charlotte, NC 28210-3834  
Kaplan, Mary, 5121 Quarter Horse Dr, Laramie, WY 82070-5322  
Kauffman, Susan, 7622 SW Hood Ave, Portland, OR 97219-2934  
LaFlash, Jane, 211 S Fair Oaks Ave, Madison, WI 53704-5822  
Lee, Collin, 12126 E. Amherst Cir, Aurora, CO 80014-3302  
McCormick, Phillip, 1202 South 93rd St, West Allis, WI 53214-2711  
McGowan, Brian, POB 1282, West Tisbury, MA 02575-1282  
Merz, Matthew, 204 Crater Lake Ave, Medford, OR 97504-  
Nelson, David, 2604 37 St SE, Calgary, AB T2B 0Z2, Canada  
Reindl, Jeff, 18585 Lost Horizon Dr., Littleton, CO 80127-9762  
Richter, Susan, 397 Boedtker Rd, Springfield, VT 05156-9479  
Roberts, Judith, POB 1342, Quechee, VT 05059-1342  
Sandgren, Eric, 4813 Tokay Blvd, Madison, WI 53711-1224  
Shoshany, Gila, 4215 Bainbridge St, Madison, WI 53716-1644  
Smith, Jane G., 319 Magnolia Dr, Nederland, CO 80466-9616  
Swecker, Andrew, 690 Clay St. E, #2, Monmouth, OR 97361-2403  
Taylor, Emily, 995 Westview Dr, Boulder, CO 80303-3045  
Thomas, Rita, 5586 Cheryl Dr, Fitchburg, WI 53575-2025  
Winship, Danelle, 3224 S Tulare Cir, Denver, CO 80231-4364  
Xu, Danxia, 622 Gaines Dr, Ottawa, ON K1J 7W6, Canada  
Zoller, Elise, 4525 S Gilead Way, Salt Lake City, UT 48124-4017

## NARGS Donations

Donations to NARGS between May 1 and July 30, 2017: \$8,456.

Designated for the general fund and the Rock Garden Quarterly and in memory of Harry Dewey, John Rountree, and Jo Banfield.

Adirondack Chapter—NARGS	Franklin, Catherine (Alaska)
Mason-Dixon Chapter—NARGS	Gregg, Laura (Pennsylvania)
Piedmont Chapter—NARGS	Hansen, Chris (Michigan)
Potomac Valley Chapter—NARGS	Hemingson, Joyce (Connecticut)
Rocky Mountain Chapter—NARGS	Robertson, John (Illinois)
Siskiyou Chapter—NARGS	Shannon, Jerry (Minnesota)
Adams, Daniel Holden (New York)	Spar, Elizabeth (Arizona)
Aurichio, Linda (California)	Ward, Bobby (North Carolina)
Bell, Lynne (Oregon)	Wessells, Arcangelo (California)
Bush, Allen (Kentucky)	Whyman, Steven (North Carolina)
Fluet, Amy (Wyoming)	

## NARGS annual dues beginning October 1, 2017:

Member, US & Canada (single):	\$40 (no change)
Member, Other Countries (single):	\$45 (no change)
Household, US & Canada (two members):	\$70
Household, Other Countries (two members):	\$75
Patron (single):	\$100
Patron (household):	\$150
Student (single):	\$15 (no change)

## Patrons

The following recently became NARGS patrons: for 2017

HANSEN, CHRIS (GARDEN SOLUTIONS, ZEELAND, MICHIGAN)  
LANGAN, MARK (MULBERRY CREEK HERB FARM, HURON, OHIO)

# SEED EXCHANGE

I think, overall, that this has been a fairly comfortable year for gardens and gardeners: not too many heat waves, and a lessening of drought conditions. I do hope that the spring and summer rains have been good to you, and were reflected by increased blooming and, of course, seed set.

With the deadline for receiving seeds set at November 1, there is still some time to collect, clean, and ship to our Seed Exchange. A donation of seed from five different species (enough to make at least 5 packets) will net you an additional 10 packets on your order — plus the advantage of priority when your Main Distribution order is filled. Not to mention (but I will, anyway) the appreciation of your fellow members, and the understanding that you are helping to maintain one of the most important benefits of NARGS membership.

The Donation form and instructions were included with the Summer issue of the *Quarterly*, as well as the seed import permits and mailing labels that our Canadian and overseas members must use to send seeds to the US. If you did not receive these documents, contact our Seed Intake Manager, Laura Serowicz. Instructions are also on the website: <https://nargs.org/seed-donation-instructions> along with some helpful links: <https://nargs.org/seed-exchange-helpful-links>

All seeds should be sent to:

Laura Serowicz  
15411 Woodring Street  
Livonia, Michigan 48154-3029  
U.S.A.  
[seedintake@mi.rr.com](mailto:seedintake@mi.rr.com) or [seedintake@gmail.com](mailto:seedintake@gmail.com)

Donations from members living in the US should be mailed in time to reach Laura Serowicz by the deadline of November 1.

Donations from members living in Canada and overseas should be mailed as soon as possible, certainly by October 15. Any Canadian or overseas donors who need a second set of import permits and mailing labels should contact Laura immediately. If you think that your seeds might arrive just slightly past the deadline, email your list of seeds to Laura in advance.

If you have plants whose seeds ripen late in the season, send the complete list now (including the late-ripening seeds), along with the seeds that have already ripened. Then, send the late-ripening seeds so that they arrive by December 1.

This year's Seedlist will appear on the NARGS website on December 15, and the Seed Exchange will be open for electronic orders at that time.

If you are planning to use the website to place your order, be sure that our Executive Secretary, Bobby Ward ([nargs@nc.rr.com](mailto:nargs@nc.rr.com)) has your most current email address; this is how you will be verified as a NARGS member. You should also set your personal username and password now, in order to be ready when the Seedex goes live. If you're unsure of the procedure, see the FAQ (Frequently Asked Questions) page for instructions: <https://www.nargs.org/faq-page>

If you prefer to send your order by postal mail, you need to request a print copy of the Seedlist by December 1 from:

Joyce Fingerut  
537 Taugwonk Road  
Stonington, Connecticut 06378-1805  
U.S.A.  
[alpinegarden@comcast.net](mailto:alpinegarden@comcast.net)

Fulfillment of your seed orders will begin in early January, beginning with orders from Donors. The Main Distribution will again be handled by the Sierra Chapter, coordinated by Val Myrick and Diane Williams.

The second round of seed orders will begin when the Surplus Distribution List goes online on March 1. Orders will be filled by the Columbia-Willamette Chapter, under the direction of Jane McGary.

Thanks for all your help and participation -  
Joyce

Joyce Fingerut, Director  
NARGS Seed Exchange  
[nargs.org](http://nargs.org)  
860-535-3067

## **NARGS Tri-State Meeting**

The annual Tri-State meeting of metropolitan New York NARGS chapters (Long Island, Hudson Valley, and Manhattan) will be held in the Conference Center at Planting Fields Arboretum, Oyster Bay, NY, on Sunday, October 22, 2017, from 10:00 a.m. to 3:00 p.m. The speaker will be Yasemin Konuralp, a botanist from Turkey, who will give two talks: *The Bulbs of Turkey* and *The Flowers of Turkey*.

The first talk will start at 11:00 a.m. and the second will be given after a one-hour lunch break at 1:15 p.m. In addition to the two talks, there will be a plant sale featuring choice plants offered by several vendors and a book sale featuring titles from the collections of the late Larry Thomas and Tom Stuart.

Attendees will receive free admission and parking when they mention the Rock Garden Society meeting to the attendant at the entrance gate. Attendees are encouraged to bring a lunch. There is a snack bar on the grounds, but service can be slow. Please mark the date on your calendars for a fun and informative day with fellow rock gardeners.

All NARGS members and interested guests are invited to attend. Please contact Brendan Kenney ([nycbeard@gmail.com](mailto:nycbeard@gmail.com)) for more information.

## **NARGS Chapter Challenge Grant**

**The Rocky Mountain Chapter of NARGS has announced a challenge grant of \$10,000 to other NARGS chapters. Rocky Mountain Chapter will match dollar for dollar donations made to NARGS during the calendar year 2017 by other NARGS chapters (not by individuals) up to \$10,000. We thank the Rocky Mountain Chapter and its board for this challenge grant.**



## **Upcoming NARGS Meetings for your Calendar**

### **NARGS Annual Meeting and Board Meeting**

#### **“Rock Gardening in the Southeastern U.S.: Past, Present, and Future”**

Hosted by the Piedmont Chapter

November 17 – 19, 2017

Optional pre-conference trip: November 15 – 16, 2017

Raleigh-Durham, North Carolina

Contact: David White (dmwhite\_nc@yahoo.com)

### **NARGS Annual Meeting and Board Meeting**

#### **“Where Alpines Meet the Sea”**

Hosted by Newfoundland Chapter

July 6 – 8, 2018

Optional post-conference trip: July 9 - 15, 2018

St. John’s, Newfoundland, Canada

Contact: Todd Boland (todd.boland@warp.nfld.net)

### **NARGS Study Weekend**

#### **“Rooted in Diversity”**

Hosted by Delaware Valley Chapter

May 3 – 5, 2019 (that's right: 2019)

Philadelphia area (to be announced)

Contact: Jerry Rifkin (jerryr95@comcast.net)

## **NARGS Traveling Speaker**

The NARGS traveling speaker this fall is Yasemin Konuralp, a botanist from Turkey, who will be giving talks on alpines, bulbs, and wildflowers of Turkey. She will be speaking to chapters in the U.S. Northeast and Mid-Atlantic states from mid-October to early November. Chapters include: Berkshire, Fells, Adirondack, the Tri-State meeting, Delaware Valley, and Potomac Valley.

Contact your chapter’s program chair to determine dates, times, and locations.

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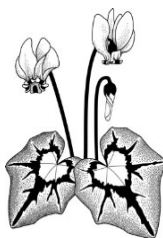
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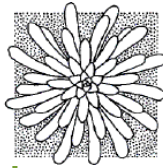
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The Board of Directors of NARGS consists of the four above-named officers, the immediate past president of NARGS, and nine elected directors.

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